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94th Congress
2d Session

COMMITTEE PRINT

MANAGEMENT OF INDIAN NATURAL RESOURCES

PREPARED BY THE

COMPTROLLER GENERAL OF THE UNITED STATES

AT THE REQUEST OF

HENRY M. JACKSON, *Chairman*

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

NOVEMBER 1976

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MEMORANDUM OF THE CHAIRMAN

To Members of the Senate Committee on Interior and Insular Affairs:

On June 11, 1975, I asked the General Accounting Office to investigate and report to the Committee on the Bureau of Indian Affairs' efforts to encourage the development of Indian-owned natural resources, focusing specifically on forestland, rangeland, cropland, oil, gas and coal.

The first part of the report was submitted to the Committee on August 18, 1975, and covered forestland, rangeland and cropland. The minerals report was submitted on March 31, 1976. Because both reports include information and recommendations of significant value to the Congress, the Administration, Indian tribes and the general public, I have asked that they be published as a Committee print.

The reports underscore the importance of Indian-owned natural resources to the future of the affected tribes and to the Nation as a whole. The reports highlight the Federal Government's failure to manage those resources properly—an apparent breach of the fiduciary duty owed to Indian tribes.

The reports make clear that we lack an accurate inventory of Indian resources—seemingly a basic requirement for proper management and development. It is difficult to imagine how realistic bidding, leasing and development, whereby Indians would receive a fair market value for their resources, could occur without such an inventory.

An estimate by the United States Geological Survey that Indians may own upwards of 13 percent of the Nation's identified coal resources—most of which is high grade, easily mined surface coal—shows the potential value of that resource alone. Yet the Government's record of mismanaging Indian coal leasing and development is undeniable.

The reports show that resource management plans, simple lease provisions which require Indian hiring preference in mineral industry, plants, and inter-agency exchange of mineral development information are lacking. All of this, plus the failure of the BIA and USGS to monitor lease terms so as to assure timely payment of royalties reflects, in some degree, the lack of knowledgeable mineral personnel in the Government who are available to handle Indian resources.

Finally, the report illustrates the inflexibility of mineral leasing regulations which require strict adherence to flat rates per ton rather than percentage rates geared to reflect the fluctuating market price of coal—an approach which results in substantial losses of profits to Indian tribes and individuals.

The cropland, forest land, and rangeland report also reflects the BIA's poor management of tribal resources. Again, inventory data is shown to be deficient. Again, good management and planning practices are absent. And again, the tribes lose revenue because of these failures.

Both reports indicate that opportunities do exist for increasing production, revenue and employment for the Indian tribes which own these valuable resources. The recommendations should be carefully considered by all the parties to whom they are addressed. Hopefully, the reports will help assure that Indian resources are better managed in the future, not only in the interest of Indian tribes but also in the national interest.

HENRY M. JACKSON, *Chairman.*

REPORT TO THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

Indian Natural Resources--Opportunities For Improved Management And Increased Productivity Part I: Forest Land, Rangeland, And Cropland

Bureau of Indian Affairs
Department of the Interior

The management of Indian natural resources has been hindered by

--limited long-term planning for resource development,

--lack of personnel for technical assistance and advice, and

--conflict of tribal or individual Indian desires with accepted resource management practices.

This report makes numerous recommendations to help overcome these problems and improve the management of natural resources to increase the benefits to Indian people and to assist in meeting the Nation's long-term needs for food and fiber.

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-114868

The Honorable Henry M. Jackson, Chairman
Committee on Interior and Insular Affairs
United States Senate

Dear Mr. Chairman:

This is our report on opportunities for the Department of the Interior to improve management and increase the productivity of forest land, rangeland, and cropland on Indian reservations. We made this review pursuant to your June 11, 1974, request, as modified by subsequent discussions with your office.

You asked us to review the Bureau of Indian Affairs' efforts to help Indians in developing their natural resources, to provide much-needed employment to Indians and help reduce our Nation's shortages of food and raw material. This report covers our review on 11 major Indian reservations of the three major renewable resources--timber, range, and cropland. Our review of energy-related resources--coal, oil, and gas--will be covered in a separate report.

We obtained Department comments and considered them in preparing this report. They are included as appendix II.

We invite your attention to the fact that this report contains recommendations to the Secretary of the Interior. Section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report. We will be in touch with your office in the near future to arrange for the release of the report so that the requirements of section 236 can be set in motion.

The Congress recently established the American Indian Policy Review Commission to study national Indian policy. When released, a copy of the report will be given to the Commission.

Sincerely yours,

Comptroller General
of the United States

Contents

CHAPTER		Page
DIGEST		i
1	INTRODUCTION	1
	Significance of Indian natural resources	1
	Basic responsibilities and objectives for managing Indian natural resources	1
2	OPPORTUNITIES TO IMPROVE MANAGEMENT OF NATURAL RESOURCES	4
	Potential for increasing productivity of Indian natural resources	4
3	MANAGEMENT OF INDIAN FOREST LAND	6
	Size and importance of Indian timber resources	6
	Forest management objectives	7
	Predicted timber shortage	8
	Opportunities for increased production	9
	Actual harvest below allowable harvest level	10
	Effectiveness of the precommercial thinning and reforestation programs could be improved	12
	Commercial thinning not being performed	19
	More dead and dying timber could be harvested	22
	Need for additional forestry staff	24
	Conclusions	26
	Recommendations to the Secretary of the Interior	27
	Agency comments and our evaluation	28
4	MANAGEMENT OF INDIAN RANGELAND	30
	Size and importance of Indian rangeland resources	30
	Rangeland management objectives	31
	Opportunities to increase rangeland production	31
	Overgrazing of Indian rangeland	32
	Range improvements not properly used or maintained	37
	Limited use of Bureau training and education programs	43
	Lack of range management plans	44

		Page
	Conclusions	46
	Recommendations to the Secretary of the Interior	46
	Agency comments and our evaluation	47
5	MANAGEMENT OF INDIAN CROPLANDS	48
	Indian croplands in perspective	48
	Cropland management objectives	49
	Need to develop an irrigation management services program	50
	Conclusion	52
	Recommendations to the Secretary of the Interior	52
	Agency comments	52
	Need to strengthen agricultural lease procedures	52
	Conclusion	53
	Recommendations to the Secretary of the Interior	53
	Agency comments	54
6	SCOPE OF REVIEW	55
APPENDIX		
I	Letter dated June 11, 1974, from the Chairman, Committee on Interior and Insular Affairs, United States Senate	56
II	Letter dated July 15, 1975, from the Department of the Interior commenting on this report	58

ABBREVIATIONS

ASCS	Agricultural Stabilization and Conservation Service
AUM	animal unit month
BR	Bureau of Reclamation
GAO	General Accounting Office
IMS	Irrigation Management Services
SCS	Soil Conservation Service

COMPTROLLER GENERAL'S REPORT
TO THE COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
UNITED STATES SENATE

INDIAN NATURAL RESOURCES--OPPORTUNITIES FOR IMPROVED MANAGEMENT AND INCREASED PRODUCTIVITY
PART I: FOREST LAND, RANGELAND, AND CROPLAND
Bureau of Indian Affairs
Department of the Interior

D I G E S T

Indian timber, range, and croplands are valuable resources that provide Indian tribes and individual Indians with considerable income and job opportunities.

--Timber receipts from 1969 to 1973 ranged between $22.5 million and $70 million.

--Ranching operations produced livestock products in 1973 valued at $64.3 million; rangeland grazing permits produced $5.7 million.

--Indian cropland produced farm products in 1973 valued at $259 million and rental income of about $20 million.

There are, however, opportunities to improve management of these resources. To increase the productivity of forest lands, the Bureau should work with the tribes to:

--Assess forest management opportunities, such as thinning and reforestation, and develop plans to eliminate the backlog of forest management work.

--Develop salvage plans and simplified sales procedures to harvest dead and dying timber.

--Determine the additional staff needed to harvest the allowable volume of timber and to perform needed forest management work, and inform the appropriate committees of the Congress of these needs.

--Periodically evaluate effectiveness of its efforts in increasing timber production and report the results to the Congress.

--Improve the financial controls over funds used for forest management projects. (See pp. 27 and 28.)

To improve the rangeland and its productivity, the Bureau and the tribes should reach agreement on long-term plans

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that provide for:

--Range and soil inventories to determine current range capacities and a schedule for adjusting herd sizes to capacity.

--Grazing permit systems for limiting grazing to range capacity and for generating funds to maintain range improvements.

--Development and prudent use of improvements to increase range capacity.

--The amount of Federal and tribal funding needed to develop the improvements.

--Education programs to promote sound range management practices.

To encourage the implementation of these plans, the Bureau should request funding only for those range improvements that agree with the long-term range management plans. (See pp. 46 and 47.)

To improve management of Indian cropland, the Bureau should:

--Work with Indian tribes and the Bureau of Reclamation to plan and carry out irrigation management services on Indian irrigation projects. (See p. 52.)

--Strengthen farm lease procedures and terms. (See p. 53.)

Management of Indian natural resources has been hindered by:

--Limited Bureau and tribe planning on how resources will be developed on a long-term basis.

--Lack of personnel to provide tribes necessary technical assistance and advice.

--Conflict of tribal or individual Indian desires with accepted resource management practices. (See p. 5.)

The Department of the Interior and the Bureau of Indian Affairs agreed with GAO's findings and recommendations and outlined numerous planned actions. (See app. II.)

CHAPTER 1

INTRODUCTION

At the request of the Committee Chairman, we have reviewed the management of natural resources on selected Indian reservations. This report presents the results of our review of the three major renewable resources on Indian reservations--timber, range, and croplands. Our review included activities on 11 major reservations. (See scope, ch. 6.) The results of our review of the management of coal, oil, and gas resources will be covered in a separate report.

SIGNIFICANCE OF INDIAN NATURAL RESOURCES

The Indians' natural resources are located on over 200 reservations in 26 States and encompass 52.5 million acres. About 129 reservations have Indian populations of at least 200 and land of at least 1,000 acres.

Indian lands include:

--5.3 million acres of commercial forest land, which is about 1 percent of the Nation's commercial forest land and includes about 38 billion board feet of timber, or 1-1/2 percent of the Nation's total.

--44 million acres of rangeland, or about 5 percent of the Nation's total.

--About 2.7 million acres of cropland, or less than 1 percent of the Nation's total.

According to the 1970 census, about 827,000 Indians lived in the United States. In 1973 the Bureau of Indian Affairs, Department of the Interior, estimated that 543,000 Indians were living on or near reservations. The reservation resources provide considerable income and employment to tribes and individual Indians.

BASIC RESPONSIBILITIES AND OBJECTIVES FOR MANAGING INDIAN NATURAL RESOURCES

The Federal Government has, by congressional acts and subsequent judicial decisions, assumed an obligation to aid those Indians with whom it has established a special relationship. The Government, through the Bureau, provides many services to these people, primarily:

--Working with Indian people and other agencies to develop programs that will lead to Indian economic self-sufficiency.

--Advising Indian landowners how they can make the most of their resources.

--Exercising trust responsibility for Indian lands.

The basic objectives for managing timber and rangelands are specified in the Indian Reorganization Act of 1934 (25 U.S.C. 466) which states that:

> "The Secretary of the Interior is directed to make rules and regulations for the operation and management of Indian forestry units on the principle of sustained-yield management, to restrict the number of livestock grazed on Indian range units to the estimated carrying capacity of such ranges, and to promulgate such other rules and regulations as may be necessary to protect the range from deterioration, to prevent soil erosion, to assure full utilization of the range, and like purposes."

In managing the Indian forest and rangeland, the Bureau has the overall objectives of (1) preserving the land in a perpetually productive state to insure continuous production of timber and forage, (2) developing the resources to provide income and employment for Indians, (3) regulating water runoff and minimizing soil erosion, and (4) preserving and developing other values, such as wildlife and recreation.

The basic authority to help Indians manage their cropland is provided for in several conservation and irrigation acts. The Bureau's overall objectives are to conserve, restore, and improve the land and help the Indians receive fair returns from using or renting their lands. In carrying out these objectives, the Bureau's activities include (1) providing for the construction, operation, and maintenance of irrigation projects, (2) giving technical assistance to Indian farmers, and (3) assisting Indian landowners in leasing their farmland for the highest economic return consistent with prudent management and conservation practices.

Within the Bureau, management of timber, range, and cropland is decentralized. Area directors and agency superintendents share responsibility for carrying out the Bureau's programs. Most of the personnel are located in the agency offices, which are usually on the Indian reservations. These people have the immediate responsibility for managing the natural resources. They receive technical support and policy guidance from the area offices and Bureau headquarters.

The land belongs to the Indian people. Therefore, rather than strictly imposing its resource management principles and requirements on the individual Indians and tribes, the Bureau strives to get voluntary acceptance of sound resource management through such means as education and technical assistance.

The importance of voluntary acceptance has been reemphasized recently in the Bureau's self-determination policy. The Secretary of the Interior recently established a task force to develop a definition of Indian self-determination for the Bureau's programs and provide for its application in Federal agencies by May 1975. Although a definition had not been finalized at the time of our review, the policy of self-determination can be tentatively defined as a lessening of the Bureau's paternalism to the tribes and the operation of their programs. However, this new emphasis on self-determination in the management of Indian timber, range, and cropland must not ignore the trustee relationship that exists between the Bureau and the tribes in the management of natural resources. According to preliminary task force determinations, this relationship requires that any actions taken regarding the natural resources must have the mutual consent of the Bureau and the tribe.

CHAPTER 2

OPPORTUNITIES TO IMPROVE MANAGEMENT OF NATURAL RESOURCES

Indian timber, range, and croplands are valuable resources that provide Indian tribes and individual Indians with considerable income and job opportunities. The annual receipts from timber harvested from 1969 to 1973 have ranged between $22.5 million and $70 million. Indian ranchers use about 90 percent of the rangeland. In 1973, Indian ranching operations accounted for livestock products valued at $64.3 million. In addition, rangeland grazing permits resulted in revenue of about $5.7 million. During 1973 Indian cropland produced farm products valued at $259 million and about $20 million of rental income. Major opportunities exist, however, to improve the management of these resources to increase the benefits to Indian people and to help meet the Nation's long-term needs for food and fiber.

POTENTIAL FOR INCREASING PRODUCTIVITY OF INDIAN NATURAL RESOURCES

Timber production could be improved by (1) increasing the timber harvest on Indian forest lands where the allowable harvest volume is not being achieved and (2) initiating or increasing certain forest management practices, including precommercial thinning and reforestation, commercial thinning, and harvesting of scattered dead and dying timber.

The condition and productivity of the Indian rangeland could be improved by (1) reducing overgrazing, (2) installing and enforcing grazing permit systems, (3) maintaining and effectively using range improvements, and (4) educating cattle owners to good range management practices.

The Bureau's assistance to Indians in managing their croplands could be improved by (1) planning and implementing irrigation management services to improve efficiency of water use on Indian irrigation projects and (2) developing lease procedures and terms to insure that Indians do not forego rental income for improvements made by renters and financed by Federal grants.

The management of Indian natural resources has been hindered by:

--Limited Bureau and tribe planning on how resources will be developed on a long-term basis. Some timber management planning has been done, but it has not included important intensive forest management practices that could increase the productivity of Indian forests. Planning for rangeland development and irrigation management on croplands has also been limited or nonexistent.

--Lack of personnel to give the tribes necessary technical assistance and advice. This has been a problem in both the timber and range programs.

--Conflict of tribal or individual Indian desires with accepted resource management practices. This has been more of a problem with rangeland than with timberland. When conflicts arise, the Bureau is placed in the rather awkward position of attempting to fulfill its legal trust responsibility and at the same time support the concept of Indian self-determination.

There are no simple or easy answers to resolving the conflict between the Bureau's trust responsibility and the concept of self-determination. The Bureau has two study groups working on aspects of this problem. In addition, the Congress, in January 1975, established the American Indian Policy Review Commission to:

--Study the legal history of the Federal Government's relationships with the Indians to determine the attributes of the unique relationship between the Government and tribes and the land and other resources they possess.

--Review the policies, practices, and structure of the Federal agencies charged with protecting Indian resources and providing services to Indians.

--Recommend to the Congress changes in existing laws, policies, and practices.

The Commission is expected to complete its work in 1977.

Detailed discussions and recommendations on the Bureau's management of Indian timber, range, and cropland resources are included in chapters 3, 4, and 5.

CHAPTER 3

MANAGEMENT OF INDIAN FOREST LAND

On many Indian reservations, timber is the mainstay of the economy and produces more jobs and income than any other resource or industry. Opportunities exist for accelerating the growth and harvest of timber on Indian forest lands. This increased production could make more jobs available to Indians and could increase tribal income. It could also help reduce projected national timber shortages.

SIZE AND IMPORTANCE OF INDIAN TIMBER RESOURCES

Indians own about 5 million acres of commercially forested lands on their reservations. The standing timber inventory of 38 billion board feet on these Indian forests is about 1-1/2 percent of the U.S. total. A comparison between the Indians' forest resource and that of Federal agencies and all forest land in the Nation as of 1970 and the harvest for that year is shown below.

	Acres	Total standing volume	1970 harvest
	(million)	(million board feet)	
Indian reservation lands	5.2	38,425	744
Forest Service and Bureau of Land Management lands	115.0	1,104,150	14,045
All U.S. lands	499.7	2,420,766	58,412

Most Indian commercial forest lands are located on 12 reservations. We visited three of these reservations: the Yakima, Colville, and Fort Apache. These three reservations have about one-third of the total Indian forest land and about one-half of the total standing timber inventory. In 1973, over one-third of the timber harvested on Indian lands was from these three reservations. Most of the timber is harvested on a selective-cut basis, with very little clear cutting. The following table provides total 1973 forest data for all reservations and specific data for the three reservations visited.

Reservation	Acres	Total standing volume	1973 harvest
		(million board feet)	
Yakima	494,882	7,796.9	141.1
Colville	802,532	5,686.1	117.5
Fort Apache	719,686	4,380.6	69.8
	2,017,100	17,863.6	328.4
Other reservations	3,244,392	20,067.9	589.2
Total, all reservations	5,261,492	37,931.5	917.6

The harvest of Indian-owned timber provides significant revenue. In 1973 timber sales revenue totaled about $70 million. For that year, timber sales revenue was $10.7 million at the Yakima, $10.9 million at the Colville, and $1.9 million at the Fort Apache reservations.

Timber provides more income than any other resource or industry on the Yakima, Colville, and Fort Apache reservations and provides considerable employment. The following table shows the estimated staff-years of forest-related Indian employment on these three reservations during 1974.

Employer	Reservation		
	Yakima	Colville	Fort Apache
	(staff-years)		
Tribe	49	90	17
Bureau	37	31	15
Tribal-owned mills	-	-	180
Private mills and loggers	70	132	85
Total	156	253	297

FOREST MANAGEMENT OBJECTIVES

The Indian Reorganization Act of 1934 requires that Indian forests be managed for a sustained production of

79-324 O - 76 - 2

timber. In managing the forests, the Bureau has the following objectives:

--Make the forest perpetually productive by providing effective protection and by applying sound forest management and economic principles to timber harvesting.

--Regulate the cut to insure continuous timber production.

--Develop the forests so the Indians may receive not only the value of the timber but also other possible benefits.

--Sell competitively the portion of the allowable harvest exceeding that being used by the Indians for their own purposes, such as in tribal-owned mills.

--Preserve the forests in their natural state when desirable.

--Regulate water runoff and minimize soil erosion.

--Preserve and develop grazing, wildlife, and other forest values.

To assist in meeting these forest management objectives, the Bureau is required to prepare a timber management plan for each major timbered reservation. The plan is to specify the quantity of timber to be harvested annually and the forest management techniques to be employed over the ensuing 10-year period. The plan is to be revised at 5- to 10-year intervals, with annual reviews during the interim.

The Bureau and the tribes finance the cost of managing Indian forest resources. Before fiscal year 1973, the Bureau deducted an administrative fee from Indian timber sales receipts to cover its costs in managing the forestry program. Beginning in fiscal year 1973, a policy change allowed the tribes to use the administrative fees for certain forest management practices on their lands. In fiscal year 1973, the Federal appropriation for the Bureau's forestry program was $5.9 million and the tribes incurred costs or obligations of $3.7 million under the administrative fee program.

PREDICTED TIMBER SHORTAGE

Demands for lumber and plywood are increasing more rapidly than softwood sawtimber supplies can be made available.

An October 1973 Forest Service report entitled "The Outlook for Timber in the United States" showed that, if the then current management levels of the Nation's forests were maintained and if timber product prices relative to competing products remained the same, softwood sawtimber shortages would start to occur during this decade and continue to increase into the next century. The study showed, for example, that U.S. demand for softwood sawtimber would exceed supplies by about 9 billion board feet in 1980, by about 15 billion board feet in 1990, and by about 18 billion board feet in 2000. For hardwood sawtimber, the report showed a surplus in 1980, a deficit of 300 million board feet in 1990, and a deficit of about 2 billion board feet in 2000.

Indian commercial forests contain predominantly softwood tree species, such as ponderosa pine and Douglas fir, and therefore could provide some of the needed softwood sawtimber.

OPPORTUNITIES FOR INCREASED PRODUCTION

Opportunities exist for accelerating timber production on Indian forest lands. These opportunities include:

--Increasing the volume of timber harvested to the level permitted under sustained yield.

--Improving the effectiveness of precommercial thinning and reforestation programs.

--Performing commercial thinning.

--Harvesting more dead and dying timber.

The Bureau is not taking advantage of these opportunities for a variety of reasons, but mainly:

--It has not established specific goals and action plans for identifying and accomplishing needed forest management work.

--It has not made any substantial effort to acquire the personnel and funds needed to fully manage the Indian forests.

--Tribes, in some cases, are hesitant to increase timber harvesting.

Actual harvest below allowable harvest level

The Bureau, to insure a sustained yield of timber on Indian lands, sets an allowable harvest--the volume of timber that can be cut each year. From 1969 through 1973, however, the annual volume of timber harvested on some reservations was consistently below the allowable harvest level.

Each year about 110 million board feet of harvestable timber is left in the forests on the 12 major timbered reservations alone. This represents about $5 million which could have been earned by Indians if the full allowable harvest were sold. Also, this uncut harvestable timber is enough to construct 11,000 single-family homes. The following table shows the harvest shortfall and estimated revenue losses.

Reservation	1969-73 average Allowable harvest	Actual harvest	Harvest shortfall	Revenue losses
	(million board feet)			
Yakima	157	143.9	13.1	$ 701,990
Colville	120	111.5	8.5	497,335
Fort Apache	92	67.9	24.1	522,414
Total	369	323.3	45.7	$1,721,739
The 12 major timbered reservations	896	785.4	110.2	$5,414,897

Since the value of timber has increased considerably since 1969 and the allowable harvest has recently been substantially increased on one reservation, future revenue losses will probably be much greater than those shown above.

Yakima Reservation

The volume of timber harvested on the Yakima reservation has consistently been less than the allowable harvest level. To date, approximately 52 percent of the forest area has been partially cut over and the balance is virgin. Much of the virgin timber is overmature, slow growing, and needs to be harvested to allow young, fast-growing stands to be established.

The following table compares the allowable harvest level and average annual actual harvest since timber harvesting was started in 1943.

Years	Allowable harvest level	Average annual volume harvested
	(million board feet)	
1943-52	42	13
1953-61	70	67
1962-65	136	106
1966-73	157	146
1974	186	127

According to the Bureau forest manager at the reservation, the principal reason for undercutting is the insufficent number of forestry personnel. He stated that, to harvest a greater volume of timber, additional trained forestry personnel with the capability to prepare and administer timber sales are needed.

This lack of forestry staff has concerned tribal members. Recently tribal officials went to Bureau headquarters to request additional staff for the Yakima agency. The chairman of the tribal timber committee said that Bureau officials told the tribal members that no additional forestry personnel could be provided due to personnel ceilings and fund restrictions.

Colville Reservation

As on the Yakima reservation, the volume of timber harvested on the Colville reservation is less than the allowable harvest level. The allowable harvest level is currently 120 million board feet based on a timber management plan prepared in 1961. From 1969 through 1973, the annual volume of timber harvested averaged about 8 million board feet less than the allowable level. The Bureau forest manager at the reservation stated that the lack of forestry personnel to prepare and administer timber sales has been the limiting factor in achieving the full allowable harvest.

Recent timber inventory data and a new allowable harvest computation indicate that the allowable harvest level should be increased 16 million board feet. If the new computed volume

is approved, the allowable harvest will be about 136 million board feet annually. Tribal officials told us that they are, however, hesitant about having additional volumes harvested because they believe it may result in the removal of too many of the reservation's larger trees. They said that from an aesthetic standpoint, they do not want a forest with smaller-sized trees.

Fort Apache Reservation

The annual allowable harvest on the Fort Apache reservation is about 92 million board feet. The actual harvest has, however, averaged only about 68 million board feet a year from 1969 through 1973. According to Bureau forestry officials, the full allowable harvest has not been cut because the tribe decided to process the timber in its own mills and because, due to current economic conditions, the market for wood products is not strong.

In 1970 the tribe stopped selling timber to private sawmills because it wanted to process the timber in its own sawmill. At that time, the tribe owned one sawmill that had a capacity of only about 60 million board feet--32 million board feet less than the allowable harvest. The actual harvest was, therefore, limited by the mill capacity.

In 1973 the tribe began operating two additional sawmills, raising the processing capability above the allowable harvest level. The actual harvest has not yet, however, approached the allowable harvest. This is occurring, according to the Bureau forest manager, because of current poor market conditions for wood products. He doubted that his forestry staff would be large enough to harvest the full allowable volume when market demand improves.

Effectiveness of the precommercial thinning and reforestation programs could be improved

Reforestation and precommerical thinning are intensive forest management practices which result in additional timber being available for future harvest. Reforestation is generally done by planting seedlings to replace trees on lands deforested by timber harvesting, fire, insects, disease, and other causes. (Photograph 1 shows an area in 1975 that should have been reforested in 1964.) Precommercial thinning involves cutting a number of trees on overstocked land to increase the growth rate of the remaining trees. The trees that are thinned are too small to be merchantable and are, therefore, left in the woods. (See photographs 2, 3, and 4.)

1. Portion of a large area on the Fort Apache reservation that was deforested by a forest fire in 1964. (GAO Photograph)

The Bureau has not effectively reduced the backlog of reforestation and precommercial thinning work. In 1973, for example, thinning accomplishments for all reservations equaled only about 3 percent of the total amount of precommercial thinning needed (backlog) and the reforestation accomplishments equaled only about 4 percent of the reforestation needs. The following table shows the actual accomplishments in comparison with the backlog of needed work for the three reservations we visited and for all reservations.

Precommercial Thinning and Reforestation
Backlog and Accomplishments--1973

	Thinning		Reforestation	
	1973 accomplishments	Backlog	1973 accomplishments	Backlog
	(acres)			
Yakima	1,707	4,735	128	1,815
Colville	1,200	115,098	100	12,755
Fort Apache	295	107,000	167	13,220
Total	3,202	226,833	395	27,790
All reservations	22,190	749,681	5,543	132,651

2. Precommercial thinning is needed to increase the growth rate of this group of trees on the Yakima reservation.

3. Portion of the Colville forest that has been precommerically thinned.

(GAO Photographs)

4. Cross section of tree showing the increase in growth that can be attained from thinning an overstocked stand.

(Photograph furnished by the Forest Service)

Three major factors limited the effectiveness of the Bureau's intensive forest management work:

--Insufficient inventory data on the location, size, and condition of areas needing intensive management work.

--No plans and goals for reducing the backlog of intensive management work over a reasonable time.

--Inadequate guidelines and financial controls over the expenditure of funds available for intensive management work.

Insufficient inventory data

The size of the Bureau's thinning and reforestation backlogs is based not on forest land inventory data but on rough estimates of how many acres need this type of work. The backlog estimates are not regularly updated to include new areas that have become overstocked or understocked.

On the Colville reservation, for example, an estimated 123,000 acres of land needed precommercial thinning in 1962. This backlog acreage was based on the estimator's personal observations and experience. The Bureau has deducted annual thinning accomplishments from the backlog acreage but has not added new acreage to include areas that have become overstocked since the estimate was made. According to the Colville forest manager, the precommercial thinning backlog is probably significantly understated.

A similar situation exists on the Yakima reservation. At the end of 1973, a precommercial thinning backlog of only 4,735 acres was reported. For that same year, 1,707 acres of precommercial thinning were reported as being accomplished; this indicated that the backlog would probably be eliminated in about 3 years. According to the forest manager, the backlog currently reported is based on an estimate made in 1964 without any inventory data and has not been updated as new areas have become overstocked. The forest manager said that the backlog figure was inaccurate and considerably more acreage should be included. He said that the magnitude of the precommercial thinning needs was unknown but he estimated that at least 20,000 acres need to be thinned.

Lack of plans and goals

In April 1973, during fiscal year 1974 hearings before a subcommittee of the House Committee on Appropriations,

members of the subcommittee urged the Bureau to come forward with a specific program, such as a 5- to 10-year program for reducing the backlog of intensive management work. The Bureau has not established annual and long-term goals for performing intensive management work, nor have plans been prepared on how to eliminate the work backlog.

Bureau headquarters officials said that a well-planned program had not been developed because the Bureau does not have sufficient resources to devote to such an effort and still maintain current harvest levels. Bureau forest managers stated that planning for intensive management work has been minimal, primarily because of the low funding, poor inventory to work from, and higher priority placed on harvesting timber. They said that, because most of the forestry personnel are needed for preparing and administering timber sales, little effort can be directed toward planning intensive management work.

Inadequate financial advice and controls

Special funds have been available for intensive forest management work since July 1972. At that time, the Assistant Secretary of the Interior, Public Land Management, authorized the Bureau to pay for timber management work, performed or authorized by tribes, up to a maximum of 10 percent of the revenue generated from the sale of tribal timber. Previously an administrative fee of up to 10 percent of the timber sales revenue was deducted and paid into the Treasury as miscellaneous receipts. Procedures were not, however, established in 1972 for reviewing how the funds were being spent, and as a result the funds have not always been used to improve the management of Indian forest lands. A requirement that the funds be obligated during the same year that timber sales receipts are earned may have also contributed to the inefficient use of the funds.

The new policy substantially increased the amount of funds available for thinning and reforestation, especially on those reservations having high timber sales revenue. For example, in the fiscal year preceding the policy change, $1,307 and $3,890, respectively, were spent for intensive management work on the Yakima and Colville reservations. As a result of the policy change, over $1 million in 10-percent funds were available for intensive management work on each of these reservations in fiscal year 1974.

At the time he approved the policy change, the Assistant Secretary stated that the new policy was intended to provide

needed increases in funds for the forestry program which the Department had been unable to obtain through the normal budgetary processes. In response to the policy change, the Bureau established general guidelines for spending the 10-percent funds, which recommended the funding of the following forestry activities:

--Intensive forest management practices, such as thinning and reforestation.

--Timber sale administration

--Fire presuppression.

--Modernized forest management inventories and planning.

The guidelines were, however, open ended and allowed the funds to be used for any other necessary expenses.

Procedures were not established for systematically reviewing how the funds were being used and we found that they were not always being effectively used. On the Colville reservation, for example, the Bureau reported that about $2 million was spent for salaries, supplies, and equipment for intensive forest management work in fiscal years 1973 and 1974. On the basis of an estimate by a Bureau forestry official that precommercial thinning costs $50 an acre, this money would have thinned 40,000 acres. During the 2-year period, only 3,000 acres were thinned and almost no planting was done.

In contrast, the Bureau reported that about $168,000 was spent for intensive management work on the Yakima reservation during fiscal years 1973 and 1974. A Bureau official said that 2,414 acres of thinning and 219 acres of planting were accomplished with these funds. Most of the additional 10-percent funds at the Yakima reservation were reported as being spent for timber sale administration and fire protection.

Examination of Bureau and tribal records and discussions with Bureau and tribal officials at the Colville reservation revealed that expenditures were made that have little or no impact on improving the management of the reservation's forest lands. Such expenditures during 15 months of fiscal years 1973 and 1974 amounted to about $386,000 and included such items as:

--$25,926 for a loader tractor. This equipment is being used at a tribally owned and operated plant where fenceposts are manufactured.

--$33,165 for a combination truck, trailer, and crawler tractor. The Bureau's Branch of Land Operations is using this equipment to develop springs on range and forest lands for watering cattle.

--$53,567 for a computer and parts. The computer is used for tribal business and as a training tool for teaching tribal members how to operate computers.

--$8,000 and $1,350 for a metal building and shag-carpeting, respectively. The building is being used for tribal offices.

--$39,270 for payment of the balance due on a road construction vehicle costing $73,061. The tribe acquired the vehicle to train Indian heavy equipment operators under a Bureau-funded training contract project. The vehicle was used for a short time in 1973 for training and has not been used since.

Another factor that has affected expenditures made from the 10-percent funds is the Department's requirement that the funds be obligated during the same year the timber sales receipts are earned. Some Bureau and tribal officials have criticized this requirement because the exact total of timber sales receipts is not known until after the year has ended. Consequently, some tribes have failed to obligate the full 10 percent of timber sales receipts. For example, at the end of fiscal year 1974, $123,309 went to the Treasury because the Yakima tribe did not know that the amount of the 10-percent funds available would be as high as $1.1 million until after the year ended. A tribal official said that, because many obligations have to be made in a short time near the end of the year, the tribe does not have the time to plan for the most effective use of the money.

Recently a Bureau task force studied the policies for using the 10-percent funds and recommended that the Bureau allow the tribes 2 years to obligate the funds. The Bureau still is considering this recommendation.

Commercial thinning not being performed

In contrast to precommercial thinning of trees that are too small to have merchantable value, some Indian forest land is overstocked with young trees that are large enough to be sold and processed into wood products.

5. A timber stand on the Yakima reservation that is overstocked with trees large enough for commercial thinning. (GAO Photograph)

Through commercial thinning sales, these trees can be removed to improve the growth rates of the remaining trees. Although large areas exist where commercial thinning could be done, the Bureau has not performed this type of work. On the three reservations we visited, the Bureau had not determined the extent of commercial thinning opportunities nor had the Bureau developed plans and goals for performing commercial thinning.

On the Yakima reservation, for example, the Bureau had not determined how many acres of forest land needed commercial thinning. The Bureau forest manager, however, stated that a 100,000-acre area on the reservation had many acres needing commercial thinning. An insect epidemic near the end of the last century destroyed much of the original timber stand, and now dense, overstocked, stagnated stands of pole and small sawtimber-sized trees cover most of the area. No commercial thinning has been done, however, and none is planned because, according to the Bureau forest manager, the number of forestry personnel is not adequate to prepare and administer commercial thinning sales as well as the regular timber sales.

Similar commercial thinning opportunities exist on the Colville and Fort Apache reservations. On the Colville reservation, the Bureau forest manager said that, in addition

to a shortage of staff, some of the areas that need commercial thinning do not have roads. He said that the value of the trees that would be removed from commercial thinning would not be sufficient to pay for the full cost of building the needed roads into the area. The manager said that Federal funds would be needed to help pay the cost of building the roads if a commercial thinning program were started in these areas.

To evaluate the feasibility of commercial thinning, we contacted a representative of a large private timber company that owns about 260,000 acres of commercial forest land in central Washington. The company representatives said that about 2,000 acres of its land is commercially thinned each year and a portable small log sawmill has been built to process the logs. The representative said that, in addition to the increased timber growth resulting from the commercial thinning, the company is making a profit from operating the small log sawmill. The representative said that the company wants to purchase commercially thinned logs from both the Yakima and Colville reservations. By locating a small log sawmill close to a thinning operation, transportation costs

6. Portable, small log sawmill that is used for processing logs removed from commercial thinning sales on private forest lands. (GAO Photograph)

are reduced and commercial thinning becomes more profitable--especially for thinning areas that are close to existing access roads.

More dead and dying timber could be harvested

Each year insects, fire, wind, and other elements kill or damage considerable volumes of timber on Indian forest lands. (See photographs 7 and 8.) On the Colville reservation, 47 million board feet of timber, an amount equal to 39 percent of the annual allowable harvest, dies each year. On the Yakima reservation, the mortality averages 12 million board feet annually. The Bureau has not established a program for systematically harvesting this timber and, therefore, a large volume is not harvested and deteriorates to the point where it can no longer be used for lumber and plywood.

A systematic program for salvaging dead and dying timber on all accessible forest acres has not been established on the Colville and Yakima reservations. Goals and plans have not been established for the amount of dead and dying timber to be salvaged each year.

Bureau forest managers said they do not have sufficient staff to conduct both salvage and regular live timber sales. They, therefore, concentrate their available staff on live timber sales because a lower return is expected from salvage sales. Under existing procedures, additional time is required to prepare and administer salvage sales due to the scattering and low volume per acre of dead and dying timber. The Bureau's forestry manual does not tell how sale preparation and administration procedures could be shortened for salvage sales to make the return more comparable to that of live timber sales.

At the Fort Apache reservation, the Bureau is developing a program for the entire forest area. The dead and dying timber will be sold to the tribally owned mills. An estimated 25 million board feet of scattered dead and dying timber will be harvested over the 5-year life of the contract. The cutting of this timber is expected to start during 1975.

The forest manager at the Fort Apache reservation said that he will be able to make this salvage sale because he currently has personnel available to do the necessary sale preparation and administration work. He said that the reservation's annual timber harvest has decreased since the tribe decided to process the entire harvest in its own

7. Defoliated dead trees on the Colville reservation

8. Defoliated dead tree on the Fort Apache reservation.

(GAO Photographs)

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sawmills. Likewise, this tribal decision has enabled the Bureau to eliminate some sale administration procedures normally used when selling timber to private companies or individuals. According to the forest manager, the combined changes have made some of his forestry staff available for salvage sales that would normally be needed for administering the regular live timber sales.

The U.S. Forest Service is currently implementing recommendations made in a prior GAO report 1/ regarding the establishment of a systematic salvage program on its national forests. This program is to include plans for salvaging the maximum feasible volume of dead and dying timber. It also will include simplified sale preparation and contract administration procedures for lowering the cost of and reducing the time required for salvage timber sales.

Need for additional forestry staff

Bureau forest managers stated that the lack of forestry staff has been the primary obstacle encountered in trying to (1) meet the allowable harvest level, (2) conduct an intensive forest management program, (3) perform commercial thinning, and (4) harvest additional volumes of dead and dying timber.

The Yakima agency and Portland area forestry staffs recently completed analyses of forestry staffing needs for the Yakima reservation. The analyses indicated that an additional 26 Bureau and 9 tribal employees are needed to adequately administer the forestry program on the Yakima reservation and fully meet the trust responsibility to the tribe. According to the analysis, the additional Bureau staff would annually cost about $300,000 but would provide an increase in timber income to the Indian owners of $4.2 million.

We compared the size of the Bureau forestry staff at the Yakima reservation with that of a U.S. Forest Service office. Although we did not evaluate the adequacy of the Forest Service's operations, the comparison appeared to confirm Bureau officials' statements that they do not have a forestry staff large enough to fully manage the Indian forest resource.

The Wenatchee National Forest is adjacent to the Yakima reservation and has similar forest conditions. It has an

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1/"More Useable Dead or Damaged Trees Should Be Salvaged to Help Meet Timber Demand" (B-125053, Oct. 5, 1973).

allowable harvest volume of 177 million board feet compared with the Yakima reservation's 186 million board feet allowable harvest. The Wenatchee National Forest has a staff of 104 employees actively engaged in timber harvesting or intensive forest management activities. Many employees, such as district rangers and engineers involved in the design and construction of roads, also help accomplish these activities, but for comparison, we did not count them.

Of the 104 employees, 55 are full time and permanent and 49 are part time. Of the part-time staff, 20 are permanent and work about 11 months a year. The balance of the part-time staff (29 employees) work about 3 months a year.

The Yakima reservation has a forestry staff of 43 employees harvesting timber or managing intensive forest activities. Of this total, 39 are full-time, permanent employees and 4 are temporary.

When the size of the forestry staff is compared with the allowable harvest volume, the Wenatchee National Forest has a considerably larger staff. According to our analysis, for a million board feet of allowable harvest volume, the Wenatchee National Forest has about twice the staff available as does the Yakima reservation.

With a larger forestry staff, the Wenatchee National Forest has been able to harvest a larger volume of timber and has accomplished more intensive forest management work, which increases the volume of timber available for future harvesting. From 1969 through 1973, the Wenatchee National Forest's annual harvest averaged 180 million board feet. For the same period, the Yakima reservation harvest averaged 144 million board feet. During a similar 5-year period, 1/ the Wenatchee National Forest accomplished about the same number of acres of precommercial thinning but did over 20 times as many acres of reforestation. The Wenatchee National Forest was also able to establish commercial thinning programs on some of its districts, but the Yakima reservation has not established such a program. Currently, the Wenatchee National Forest has two commercial thinning sales in progress. The following table compares the forest management activity on the Wenatchee National Forest and the Yakima reservation.

1/The Wenatchee National Forest reports its precommecial thinning and reforestation accomplishments on a fiscal year basis; the Yakima reservation reports on a calendar year basis.

	Wenatchee National Forest	Yakima Reservation
Average annual timber harvest, 1969-73	180 million board feet	144 million board feet
Precommercial thinning (5-year average)	1,615 acres per year	1,720 acres per year
Reforestation (5-year average)	2,757 acres per year	138 acres per year
Commercial thinning	Two sales in progress 4.2 million board feet	None

CONCLUSIONS

Because of the opportunities for increasing Indian employment and income and for reducing the Nation's predicted, long-term shortage of softwood sawtimber, the Bureau should make strong efforts to accelerate timber production on Indian forest land. Accelerating production will require improved work planning, better financial controls, simplified timber sales procedures, and additional staffing at some reservations.

To better direct its efforts toward management opportunities that will result in the best timber growth, the Bureau needs to improve its planning of precommercial thinning and reforestation work and to establish plans for commercial thinning. Improved planning requires inventory data on the location, size, and condition of areas needing thinning or reforestation. This data should provide the basis for identifying the best management opportunities. Long-range plans should be established for eliminating the backlog of needed work over a reasonable time, with emphasis on accomplishing the best opportunities first.

Considering the importance of improving the management of Indian forest lands, financial controls should be established to insure that the use of 10-percent funds be limited to those activities that contribute to better management. Guidelines should not be open ended; they should limit the use of the funds to specific forest management activities. Review procedures are needed to insure that the funds are being used in accordance with the guidelines.

Since the total amount of 10-percent funds is not known until after the period for obligating the funds has ended,

the tribes do not have sufficient time to plan for the effective use of all the funds. A Bureau task force has recommended that the tribes be allowed a longer period in which to obligate 10-percent funds. We agree, and therefore are not making a recommendation at this time, pending disposition of the task force's recommendation.

The Bureau should provide for the salvage of additional volume of dead and dying timber on Indian lands. To do this, it needs to develop continuous salvage plans and use timber sales preparation and administration procedures especially tailored for the prompt salvage of scattered timber. Improved planning and modified sales procedures should reduce the manpower needed for a salvage sale. The Forest Service is establishing a systematic salvage program on its national forests to increase its harvest of dead and dying timber. Consultation with the Forest Service should prove to be of value to the Bureau in improving its salvage program.

Cutting less than the allowable harvest volume is not in harmony with the Bureau's forest management objective of sustained yield. The Bureau objective states that the allowable cut will be both a limitation on and an objective for the timber area to be treated. Bureau officials said that the primary reason for undercutting is the lack of forestry personnel to prepare and administer timber sales. The Bureau also cited this reason for not developing programs, such as commercial thinning, that would increase timber growth. Our staff analysis at a reservation showed that the Bureau was understaffed in comparison with a nearby national forest. An increase in staffing may therefore be needed if Indian forests are to be more fully managed for increased timber production.

The Bureau should obtain, evaluate, and report to the Congress appropriate information on its success in accelerating timber production. Such information should give the Congress an improved basis on which to review the Bureau's forestry program accomplishments, to evaluate the effectiveness of current forest policy, and to assess Bureau forestry personnel and funding needs.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To increase timber production on Indian forest land, we recommend that the Secretary of the Interior direct the Bureau of Indian Affairs to work with the tribes to:

--Assess the viability of such forest management opportunities as precommercial thinning, commercial thinning, and reforestation to identify the best opportunities.

--Develop long-range work plans for eliminating the backlog of needed forest management work over a reasonable time, with emphasis on the best opportunties first.

--Develop guidelines that limit the use of 10-percent funds to specific forest management activities and establish review procedures to insure the funds are used in accordance with the guidelines.

--Develop salvage plans and use simplified timber sale preparation and administration procedures tailored especially for harvesting dead and dying timber.

--Determine the additional staff needed to harvest the allowable volume of timber and to perform needed forest management work and inform the appropriate committees of the Congress of these needs.

--Periodically evaluate the effectiveness of its efforts in increasing timber production and report the results to the Congress.

AGENCY COMMENTS AND OUR EVALUATION

The Bureau and the Department agreed that the level of effort needed to meet the objectives of sustained yield and to achieve an allowable cut should be determined. They said a study is now underway on an agency-by-agency basis to do just that. The Congress will be notified of the results.

With respect to our specific recommendations, the Bureau said:

--It agrees that (1) the viability of forest management techniques should be assessed, (2) long-range plans for eliminating the backlog of needed forest management work should be developed, (3) salvage plans for harvesting dead and dying timber are needed, and (4) these actions will be accomplished if adequate resources can be made available.

--It believes that (1) existing guidelines for use of the 10-percent funds are basically sound, (2) the examples of questionable use of such funds were caused by inadequately administering and applying guidelines, and (3) area and agency offices will be directed to adhere to the guidelines in the future.

--A study is now in process to determine additional staffing needs. The appropriate congressional committees will be so informed, but there is no commitment to seek additional Federal appropriations.

--It agrees with periodically evaluating the effectiveness of its efforts to increase timber production and will report the results in its budget justifications.

If the actions planned are properly implemented, the Bureau's management of Indian forest land should be improved.

CHAPTER 4

MANAGEMENT OF INDIAN RANGELAND

The rangeland and livestock operations on many reservations are an important part of the economy and provide considerable employment and income. Opportunities exist to improve the management of Indian rangelands to (1) better maintain and renew the range resources and (2) increase the livestock production. This increased production could make more jobs and income available to Indians and help meet the Nation's food needs.

SIZE AND IMPORTANCE OF INDIAN RANGELAND RESOURCES

Approximately 44 million acres of rangeland on reservations in the United States are used for grazing domestic livestock and big game animals. This is about 5 percent of the 889 million acres of pasture and rangeland in the Nation. Most Indian rangelands are located in the western States, with about 60 percent in Arizona and New Mexico.

Indian ranchers use a majority of the rangeland, about 90 percent. In 1973, 17,910 Indian ranching operations accounted for livestock products valued at $64.3 million. The remainder of the rangeland was used by 779 non-Indian ranchers who provided livestock products valued at $33.9 million.

The following Indian employment and income were provided by cattle operations on the Papago and Hualapai reservations during calendar year 1973.

	Papago Reservation	Hualapai Reservation
Cattle owners	840	78
Employees of tribal enterprises, other Indian ranchers, or the Bureau (note a)	51	32
Gross income from cattle operations	$1,353,000	$279,000
Income earned from grazing fees	-	$ 12,281

a/Some double counting occurs in these figures because most employees are also cattle owners.

RANGELAND MANAGEMENT OBJECTIVES

The Bureau has trust responsibility for the management and protection of rangeland resources. The Indian Reorganization Act of 1934 directs the Secretary of the Interior to restrict the number of livestock grazed on Indian range units to the units' estimated carrying capacity and to issue rules and regulations as may be necessary to protect the range from deterioration and to insure its full use.

The Secretary has established the following objectives to fulfill these responsibilities.

--Preserve, through proper grazing management, the land, water, forest, forage, wildlife, and recreational values on the reservations and improve and build up these resources where they have deteriorated.

--Promote use of the range resource by Indians to enable them to earn a living, in whole or in part, through the grazing of their own livestock.

--Provide for such administration of grazing privileges as will yield the highest return consistent with sustained-yield land management principles and the fulfillment of the rights and objectives of tribal governing bodies and individual land owners.

OPPORTUNITIES TO INCREASE RANGELAND PRODUCTION

An estimated 13 million acres, or 30 percent, of Indian rangeland are not being properly managed and are in poor condition because (1) the range has been overgrazed, (2) range improvements have not been effectively used or maintained, and (3) limited use has been made of training and education programs. These problems have existed on some reservations for years. Short-term, stopgap measures have been taken to relieve the situation but the long-term problems still remain. An important factor hindering the effective management of Indian rangelands on some reservations is the conflict of tribal or individual Indian desires with accepted range management practices.

The Bureau estimates that, if prudent range management practices were used and necessary range improvements made, the grazing capacity of Indian rangelands would increase by 50 percent. Detailed studies were not available showing the impact this increased capacity would have on beef production. On the basis of discussions with range conservationists, agriculture professors, and extension service

officials, we were able to roughly estimate the beef production potential for the Papago and Hualapai reservations. With optimum range development and proper range management, Papago beef production could be about 2.6 million pounds a year, more than double its 1973 production of about 1.1 million pounds. Similarly, annual production on the Hualapai reservation could be 1.2 million pounds, up from 0.3 million pounds in 1973.

We believe the Bureau and the tribes must develop long-term range management plans to realize the potential benefits of a renewed, high-producing range. These plans should provide for (1) range and soil inventories to determine current range capacity, (2) timetables for adjusting herd size to capacity, (3) grazing permit systems, (4) development and prudent use of range improvements to raise the carrying capacity, and (5) education programs to promote good range management practices.

Overgrazing of Indian rangeland

Severe overgrazing deteriorates the quality of the land and reduces its capacity to provide forage for livestock. Range condition is expressed by comparing the present amount and kind of forage with the desirable forage the range is capable of producing.

--Excellent condition means the range is producing 76 to 100 percent of the desirable forage. The ground is usually covered with mulch, rain soaks in rapidly, and there is little or no erosion.

--Good condition means the range is producing 51 to 75 percent of the desirable forage. In this condition, about one-fourth to one-half of the more productive plants have been replaced by less productive plants.

--Fair condition means the range is producing only 26 to 50 percent of the desirable forage. Less desirable and productive plants dominate the forage production.

--Poor condition means the range is producing only 0 to 25 percent of the desirable forage. Annual grasses and weeds are abundant, and undesirable perennial weeds and shrubs are common. The soil is poorly protected, and severe water and wind erosion is usually present.

About one-third of all Indian rangeland is in excellent or good condition. The rest is in fair or poor condition. Range conditions in 1973 for the seven reservations included in our review and for all Indian rangeland follow.

Reservation	Condition of rangeland			
	Excellent	Good	Fair	Poor
	(percent)			
Papago	0	1	33	66
Ute Mountain	6	26	42	26
Northern Cheyenne	85	5	8	2
Hualapai	21	48	25	6
Fort Belknap	16	64	18	2
Jicarilla	9	63	25	3
Southern Ute	13	49	34	4
All reservations	13	24	33	30

Bureau regulations require the agency superintendents to use the best available technical data to establish range carrying capacity. They are to make full use of soil-range inventories and surveys when establishing or adjusting the proper number of cattle to be grazed on a parcel of land. A system of grazing permits issued by the Bureau, or by the tribes with Bureau approval, then provides the mechanism to limit grazing to the range capacity.

When followed, these methods allow (1) the rangeland to yield the highest return consistent with sustained-yield land management and (2) the improvement or buildup of deteriorated rangeland. These methods are not always followed, and overgrazing continues on some reservations because of Indian cultures and traditions, tribal conflicts, and lack of enforceable permit systems.

The following table shows the status of rangeland and grazing permit systems for selected reservations.

Status of Rangeland and Permit Systems on Selected Reservations

Reservation	Overgrazed	Permit system
Papago	Yes	No
Ute Mountain	Yes	No
Northern Cheyenne	Yes	Yes

Hualapai (note a)	No	Yes
Fort Belknap	No	Yes
Jicarilla	No	Yes
Southern Ute	No	Yes

a/Although the Hualapai Reservation as a whole is undergrazed, two of its six districts are overgrazed. There is only limited enforcement of the permit system.

Papago Reservation

The Papago reservation, with 2.8 million acres of rangeland, is currently grazed at more than double its capacity. A grazing permit system has never been adopted. As a result, individual cattle owners are not bound by permits or any other form of tribal or Bureau control.

The grazing capacity is expressed in terms of Animal-unit-months (AUMs); that is, the amount of forage required to feed a 1,000-pound cow for 1 month. In 1973 the cattle owners on the reservation used about 271,000 AUMs, while the authorized level was about 128,000.

The reservation is located in a region which endures frequent droughts. This climate, coupled with the severe overgrazing, has resulted in shortage of forage in recent years and has led to the starvation death of numerous cattle. To alleviate the problem, the Papagos have requested the Bureau to provide emergency feed supplies. In 1974 the Bureau provided $67,000 for hay and arranged for emergency water supplies.

During each drought, the Bureau advises livestock owners to sell excess cattle and reduce herds to the range's carrying capacity. However, the Indians view their cattle as valued possessions and refuse to sell. The Indians also believe additional cattle are necessary to replace those that die during a drought.

For over 40 years, the Bureau has been telling the tribe that its rangeland is severely overgrazed and strong management and control are needed to correct the problem. The Bureau's 1974 Range and Livestock Report again recommended that the Papago Council seriously consider establishing livestock control and range management programs to protect the range resources and insure a reasonable measure of stability to the livestock industry. The Bureau believed the Council had two alternatives: (1) reduce and control livestock--the best way to stabilize the livestock industry--or (2) continue

the present system--with heavy losses in range resources and cattle, necessitating the purchase of expensive hay and supplemental feed every year. The Papagos have taken no actions to institute a livestock control program.

The foremost cause of overgrazing is a conflict between good range management practices and Indian culture and traditions. For many years the Indians grazed cattle and horses without being restricted by carrying capacities established to preserve the resource. They believe the Bureau should not impair their livelihood by imposing such grazing limits.

According to Bureau officials, the Papagos have traditionally placed a great value on owning horses. The reservation has approximately 3,440 horses which consume 1.5 times the forage that the same number of cows consume, and they have a very limited economic value. Some horses are needed to work the cattle during roundups, but beyond that they are economically useless. The officials added that 1 horse is needed for each 10 cows on the reservation. To effectively operate under the current range carrying capacity, the Indians would need about 920 horses to control the cattle. As the number of horses increases, the number of cattle must be decreased to remain within the grazing capacity.

The tribe strongly resists efforts to reduce the overgrazing. According to Bureau estimates, less than 3 percent of the cattle owners have large operations--more than 150 head of cattle. Bureau personnel said these cattle owners were very independent and resented interference or assistance from others. Although all land is tribally owned, these cattlemen have traditionally controlled certain areas and do not want restrictions or controls placed on their use.

According to Bureau and tribal officials, this independence has led to conflict within the tribe. They said that the tribal council usually represents the large cattle owners and is not willing to restrict the grazing. The council opposes the tribal chairman when he attempts to control grazing and reduce the number of livestock.

Because of this conflict, the tribe has been unable to implement a permit system. Such a system would limit grazing to the land's carrying capacity by imposing penalties for overgrazing or misuse of the land. Without a permit system there is no incentive for the cattle owners to reduce the overgrazing.

Hualapai Reservation

The Hualapai reservation, with 805,000 acres of rangeland, is grazed at about 83 percent of its overall capacity. However, two of its six districts are overgrazed. The tribe has a permit system established to limit the number of cattle in each district. According to this permit system, cattle owners must keep their cattle within their assigned district and cannot use range in another district. The following table shows the grazing status of each district during calendar year 1973.

District	Authorized AUMs	Actual AUMs
1	9,144	11,730
2	10,620	13,722
3	8,880	8,082
4	10,680	7,374
5	11,520	5,382
6	9,720	3,714

Although districts 1 and 2 are overgrazed in violation of the permit system, only limited effort is made to enforce the permits. Tribal officials stated that they were reluctant to take action because many of the cattle owners are relatives or long-time friends.

The Hualapais also have a high regard for horses and have about 600 of them on the reservation. Although the horses contribute to the overgrazing, their removal would not eliminate the problem.

Other reservations

The following table shows the calendar year 1973 grazing status of the other reservations included in our review.

Reservation	Acres of rangeland	Authorized AUMs	Actual AUMs
Ute Mountain	568,087	19,243	41,952
Northern Cheyenne	324,944	124,490	142,490
Southern Ute	222,709	8,648	2,840
Jicarilla	608,708	99,531	56,986
Fort Belknap	549,834	101,575	101,575

The Ute Mountain reservation is grazed at about double its capacity and has been overgrazed every year since 1962.

The reservation has no permit system, and cattle owners can use its rangeland without restriction.

In 1968 the Bureau informed the Ute Mountain Tribal Council that it was exceeding the authorized stocking rate by more than 100 percent. They recommended corrective actions before the cattle owners were confronted with forced livestock sales at reduced prices or emergency purchase of feed. The tribe has chosen to not implement these recommendations, and overstocking has continued. In addition, emergency feed grains were requested or used for each of the last 4 years.

In October 1974 the Albuquerque area director stated that the emergency conditions on the Ute Mountain reservation were chronic and recommended that stocking adjustments be made. According to a Bureau range conservationist, the tribe was not interested in following good range management practices or listening to the Bureau's advice.

The Northern Cheyenne reservation has a grazing permit system. It has effectively controlled grazing of permitted cattle and horses; however, the reservation has about 1,000 unpermitted horses. A Bureau official believes they will not cause any serious deterioration of the rangeland.

The Southern Ute, Jicarilla, and Fort Belknap reservations are not overgrazed. Each reservation has a grazing permit system that seems to be effective in (1) limiting the livestock to the range capacity and (2) keeping the rangeland in good condition.

Range improvements not properly used or maintained

Range improvements improperly used or maintained can cause deteriorated rangeland and reduced production quality, as on the Papago reservation. It can also result in underuse of the rangeland and reduced production quantity, as on parts of the Hualapai reservation. In addition, the absence of a permit system with grazing fees can remove a source of funds normally used for the maintenance and repair of range improvements.

In its natural state, semiarid rangeland in the southwest is usually lacking characteristics necessary for effective use. Due to the absence of readily available water, such improvements as wells, pipelines, charcos, and catchments are necessary. (A charco is a deep, steep-sided dirt

tank that functions as a trough; a catchment is an artificial watershed allowing rain that falls on an apron to run off and be collected in a reservoir.) In addition, such factors as unpalatable vegetation, overuse, and the large expanses of semiarid rangeland make such improvements as reseeded ranges and fences necessary. Normally, the individual operators maintain these improvements.

Papago Reservation

Between fiscal years 1959 and 1974, about $6 million of Federal and tribal funds were spent for range and water improvements on the reservation. These improvements included such things as water supply systems (wells and charcos), reseeding, fencing, and repairs to existing improvements. A February 4, 1974, letter from the area office range conservationist to the area director stated:

> "One wonders how much longer Congress will continue to assist the Papago people in their plight of range and water improvement if the millions of dollars already expended have not and are not being protected or used properly.
>
> "It is suggested that closer surveillance be practiced over the proper use and maintenance on these expensive range improvements * * *."
>
> * * * * *
>
> "These expenditures have not significantly improved the situation on the Papago Reservation due to a lack of livestock management. It doesn't help the livestock operator or the range resources to drill additional water wells when there is not adequate forage to maintain the livestock * * *."
>
> * * * * *
>
> "Agency personnel are diligently working and planning immediate and future improvement projects with the people, but for lack of time, they are indadvertently passing over the responsibility of stressing proper use on completed projects."

During fiscal years 1975 and 1976, the Bureau plans to spend $1.1 million as part of a $3.6 million, 5-year comprehensive range and water development program specifically authorized for the Papago reservation. The Superintendent

stated that it is extremely difficult to justify a range rehabilitation program of this magnitude unless the tribe and the livestock owners are willing to reduce the livestock to the range-carrying capacity. If this is not done, the $3.6 million program will not result in the intended long-term improvement of the Papago range.

In addition, the Papago cattle owners have not always maintained existing improvements. For example, in 1961 a 1,200-acre pasture was cleared of mesquite growth and re-seeded to produce a good grazing area. This demonstration pasture was properly fenced and well maintained for 3 years, after which it was grazed according to a schedule which allowed for optimum yield. Bureau officials stated that the fences fell into disrepair and the grazing schedule was not followed after the local village leader died. In November 1974 the fences still needed repair and the range appeared to be in very poor condition.

The reservation has only a limited amount of fencing, and much of it is not maintained. The 10 grazing-district boundaries are fenced, but there is little fencing within each district to help control and rotate cattle grazing. A Bureau official indicated that each person (or district) believes the party on the other side of the fence is responsible for repairs. A primary reason for the disrepair is a lack of maintenance funds.

Normally, the grazing fees received from a permit system can be used to maintain range improvements. Bureau efforts to institute a permit system on the reservation have been unsuccessful because of the cattle owners' desire to graze as many cattle as they want without interference or control. If a grazing permit system is established, grazing fees would amount to about $253,000 a year, based on the Bureau-recommended rate of $2 per AUM. These fees would help finance the development and maintenance of range improvements. A Bureau official estimated actual expenses for operation and maintenance of improvements in fiscal years 1973 and 1974 at about $40,000 a year.

Also, Bureau officials stated that tribal officials do not always agree with them on the location of range improvements. For example, the Bureau recommended one location for a proposed charco, while livestock operators recommended another. The Bureau's location was based on soil composition and need; the operators' location was based only on need. In deference to the Bureau's emphasis on Indian "self-determination," the charco was constructed at the operators'

79-324 O - 76 - 4

location, which had a sandy soil so the charco would not retain water. Bureau officials indicated it is now worthless.

Hualapai Reservation

Although about $2.4 million of Federal and tribal funds were spent on range and water improvements between fiscal years 1959 and 1974, the reservation remains undergrazed by 17 percent. There are no long-range plans to effectively use the existing improvements or increase the livestock to the land's carrying capacity.

For example, about 16,000 acres of the district 6 common-use rangeland that was cleared of pinon-juniper growth and reseeded from 1953 to 1967 is not being fully used. Such growth is removed to reduce or eliminate the ground canopy where very little productive forage will grow. These efforts greatly increase forage production potential. Despite the excellent condition of this reseeded area, most cattle owners do not use it because they do not like to mix their cattle with cattle from the other districts.

Although improvements are not fully used and overall the range is undergrazed, the Bureau has proposed building a water development project on the western portion of the reservation. This development would cost over $2.1 million and would increase range capacity by about 1,300 head. A study by the Bureau of Reclamation indicates a lack of feasible, less expensive alternatives to this development.

Considering the lack of full use of existing improvements, the overall undergrazing of the rangeland, and reluctance of the Hualapai cattle owners to mix their cattle with cattle from other districts, it appears that the need for this planned development is questionable at this time.

In addition to the failure to fully use existing range improvements, the tribe and the Bureau do not always agree that certain improvements are beneficial and should be maintained. The Hualapais maintain improvements which they believe are beneficial but ignore others they believe are useless.

Among the maintained improvements are wells, storage tanks, and pipelines. Catchment basins have not been maintained. According to the range conservationist, 13 of these basins, funded primarily by the Bureau and costing over $100,000, are now only 20 to 25 percent effective.

Although the Bureau believes these basins are useful for catching and holding rain water, the Indians believe they are almost worthless. Weeds and other plants are allowed to grow through the tarred surface and defeat the purpose of the catchments. Without maintenance, the water nourishes the weeds and plants rather than draining into the holding tank. Discussions with Hualapai district leaders indicated these catchments were a waste of money because it never rained enough to make them effective.

The Bureau is currently maintaining one catchment to domonstrate its effectiveness in collecting water. Although the water we observed in the catchment's holding tank was discolored, the range conservationist said that it was fit for cattle consumption but that the Indians were reluctant to use it for their cattle because of this discoloration. At the time of our review, it was too early to determine if the Bureau's demonstration project would be successful and eventually acceptable to the Indians.

During fiscal year 1973, the tribe's general fund contributed about $6,000 of the $18,000 needed for the operation and maintenance of range improvements. According to tribal resolutions, grazing fees collected through the permit system are to be divided equally between (1) operation and maintenance of water developments, with any excess of this half going for range improvements, and (2) contribution to the tribe's general fund.

Although the Bureau has recommended a grazing fee of $2 per AUM, the tribe has set the rate at $0.29 per AUM. This was done in accordance with the Code of Federal Regulations which allows tribal governing bodies to establish their own rate for tribally owned land and in deference to cattle owners who complain about the high cost of grazing.

At December 31, 1973, cumulative delinquent grazing fees for the last 5 years totaled about $3,380. Annual grazing fees are payable in advance; however, tribal officials indicate their reluctance to take action against those whose payments are delinquent because many of them are relatives or long-time friends. Because of the low grazing fee compared with the recommended rate and because of a lack of collection and enforcement, adequate funds for maintaining improvements were not being provided by cattle owners.

9. Water catchment basin not maintained on the Hualapai reservation.

10. Water catchment basin maintained on the Hualapai reservation.

(GAO Photographs)

Limited use of Bureau training and education programs

Bureau training and education programs have received only limited use to further develop the Indians' range management capabilities. As of December 1974, no Indians on either the Papago or Hualapai reservations were enrolled in range training or education programs.

Bureau officials stated that most public schools are not resource-oriented, which tends to reduce the number of students entering the resources field. Until recently, the Bureau emphasized study in such fields as teaching and law. It stated that more emphasis is now being given to the study of natural resources.

The Bureau encourages all qualified Indians to seek higher education. Bureau funds are available for this purpose, and the individual is permitted to choose his own course of study at a college or university.

For fiscal year 1974, the Phoenix area office was allocated $1.2 million for higher education grants. During that year, five Indians received education grants from the area office to study agriculture and land management. In the previous year, there were seven such grantees, and in 1972 there were three. Most of these students were in their first or second year of study, and only one received a grant for more than 1 of the 3 years.

In 1971 two Papago Indians completed a specially designed range management course in Colorado. One is currently employed as the tribal herd manager, but the other no longer works in range activities. Since that time, no Papagos have attended formal range management courses. Bureau officials said the Papagos were aware of the formal training programs but had not shown interest in them.

The agency superintendent on the Hualapai reservation said that, during the past 10 years, no Indians have taken advantage of these range Management training programs because of (1) the Indians' reluctance to leave the reservation and (2) the limited effort of Bureau and tribal officials to motivate Hualapai youth to take courses in resources management.

Bureau officials added that range educational programs should be established at the local levels with no need to travel from the reservation. These local programs could

include demonstration projects designed especially for the local conditions.

Lack of range management plans

Range management plans generally have not been developed. Local Bureau officials indicated a number of reasons for the lack of current plans, including (1) higher priority work, (2) lack of funds and manpower, and (3) attitudes of Indians.

The Bureau's Range Management Handbook states that, "to carry out Bureau objectives for development and management of the Indian range resource, planning is essential." According to this handbook, the Bureau and the tribe will jointly prepare and approve range management plans. The plans are to be concerned with the effective development and use of the complete range resource through range and water improvements, good conservation practices, Indian participation and education, market demand determinations, effective sales techniques, and a realistic enforcement program. In addition, the plans should be prepared to assist the range user in reaching a better understanding of the needs of his range and to provide for a management goal. The handbook also indicates that plans should be updated periodically or as conditions change.

Papago Reservation

The reservation has no comprehensive range management plan. In 1972 the tribe requested the Congress to fund range improvements. This request concerned a comprehensive water, forage, and conservation program at a total cost of $3.6 million over a 5-year period. The benefits to be derived from this program include (1) a more secure livestock economy, (2) increased income to the Papago people, (3) a more sophisticated and proven approach to range management and range ecology, and (4) practical elimination of periodic drought crises. While this request contained descriptions of the range improvements and water developments the tribe wished to make, it covered little else required in a range management plan, such as proper stocking rates and a realistic enforcement program.

The land operations officer said the necessary data was available and a plan could be completed within a week; however, he believed this would be a wasted effort without strong enforcement on the reservation.

Hualapai Reservation

The latest range management plan, completed in 1937, was a very detailed document that included a description of the range, the economics of the livestock industry, present methods of handling livestock, and the present and proposed plan of management.

Local Bureau officials stated they have neither the funding nor the manpower to update the plan. In addition, they believe soil and range condition surveys are necessary to properly complete a new range management plan.

The Bureau range management official at the reservation also serves as the land operations officer, the forestry officer, and the soil conservationist. Because of his multiple duties, he is unable to direct much of his attention to range management planning. Most of his time spent on range management is devoted to day-to-day maintenance, completion of range and water improvements, and emergency situations.

Other reservations

Current range management plans have not been developed for the Northern Cheyenne, Fort Belknap, Jicarilla, Ute Mountain, and Southern Ute reservations.

The Northern Cheyenne reservation is one of the few reservations without a current range and soil inventory. This inventory is a basic document which must be completed before a range management plan can be prepared. A Bureau official indicated this will be one of the first tasks of a range and soil conservationist which the Bureau is attempting to hire.

The Fort Belknap reservation has no range management plans for two reasons: (1) a lack of manpower and funds and (2) the Indian landowner's ability to remove his land from a range unit. The reservation is divided into range units which are composed of tribal, State, and individual Indian lands. An Indian can remove his land from these units after 6 months' notice. Bureau officials stated that long-range planning becomes quite difficult because of this changeable status of range units.

The Albuquerque area office range conservationist stated that current range management plans have not been developed on the Jicarilla, Ute Mountain, and Southern Ute reservations because of a lack of funds and manpower.

CONCLUSIONS

Indians have significant rangeland resources which, if properly managed, could provide additional employment, income, and economic development for the Indian people and provide additional food to help meet the Nation's needs. However, good range management is not being practiced on some reservations because of (1) overgrazing of rangeland, (2) improvements not properly used or maintained, and (3) limited use of Bureau training and education programs.

As a result of these problems, the quality of Indian rangeland has deteriorated. This is particularly true on those reservations where serious overgrazing exists. In addition, the quality and quantity of cattle that a range can produce have been directly affected by the condition and effective use of the land and its improvements.

Indian cultures and traditions contribute to the range management problems. These philosophies sometimes run counter to prudent range management practices. In addition, tribal conflicts and lack of agreement between the Bureau and the tribes add to the situation. These factors have adversely affected the capability of Indian rangeland resources to satisfy both Indian and national needs.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To resolve these problems, we believe Bureau and tribal officials' development and implementation of range management plans is essential. Accordingly, we recommend that the Secretary of the Interior direct the Bureau to work with the tribes to develop long-term range management plans. These plans should provide for agreement between the Bureau and the tribes on:

--Range and soil inventories to determine current range capacity.

--Timetables for adjusting herd size to capacity.

--Grazing permit systems.

--Development and prudent use of improvements to increase range capacity.

--The amount of Federal and tribal funding needed to develop the improvements.

--Education programs to promote good range management practices.

To encourage the appropriate implementation of these plans, we also recommend that the Secretary of the Interior request funding for only those range improvements that are in agreement with the long-term range management plans and that he submit the plans to the Congress when requesting funds for range improvements.

AGENCY COMMENTS AND OUR EVALUATION

In commenting on our findings and recommendations, the Department stated that our description of Indian rangeland problems is accurate but that the outlook for improvement is not optimistic for those reservations which will not implement and enforce a grazing permit system based on proper stocking levels.

In response to our recommendations, the Bureau's current plans include:

--Appraising ongoing soil and range inventory effort to program its completion, on a priority basis, at the earliest possible date.

--Freeing range conservationists from the ministerial duties (many of which are clerical in nature) of range permits so they can work full time on making inventories and in management planning.

--Continuing and improving the grazing permit systems that are in operation.

--Requiring comprehensive management plans as justification of budget requests for improvement funds, and requiring that such improvements be based on need and be compatible with physical location.

--Carefully evaluating requests for donated feed grain when received and forwarding for approval only those reservations that have adopted and comply with a comprehensive management plan, which includes an enforceable range permit system.

Proper implementation of these plans should enable the Bureau to improve its management of Indian rangeland.

CHAPTER 5

MANAGEMENT OF INDIAN CROPLANDS

Indian croplands produced about $259 million of agricultural products in 1973. About 10,500 Indian families obtained all or part of their livelihood from farming their land. Even though the Bureau's programs have provided needed assistance to Indians in managing their cropland, some opportunities exist to improve these efforts. The Bureau needs to provide irrigation management services to encourage efficient use of irrigation waters, and agricultural leasing procedures need strengthening to insure Indian landowners do not forego rental income for land improvements made by the renter but financed with Federal grants.

INDIAN CROPLANDS IN PERSPECTIVE

The Indians have about 2.8 million acres of cropland, which comprises about 0.6 percent of the Nation's total and provided about 0.3 percent of the value of crops grown in 1969. 1/ The Gila River and Yakima reservation, where we made our review, have 8 percent of the total Indian cropland and 23 percent of the total irrigated cropland. Crops grown on these two reservations amounted to 15.7 percent of the total crop value on all Indian reservations. A comparison of the Nation's and the Indians' croplands and crop values follows.

Type of farming	Nationally	Within all Indian reservations	
	(million acres)	(million acres)	(percent of Nation)
Nonirrigated	420	1.83	0.44
Irrigated	39	.97	2.48
Total	459	2.80	.61
Total value of crops grown	$45.6 billion	$136.3 million	.03

During 1973 Indians farmed 638,000 acres of reservation land--up from 535,000 acres in 1964. Their remaining croplands, about 1.9 million acres, were leased to non-Indian farmers. An additional 168,000 acres were idle. The

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1/Latest year for which national statistics were available.

Indian landowners received $20.2 million from leasing their crop and pasture lands in 1973.

An estimated 1,902 Gila River and 395 Yakima Indians were employed in agricultural and related activities on their reservations. These Indians earned an estimated $3.5 and $1.4 million, respectively, in 1974.

	Indians employed			
	Gila River Reservation		Yakima Reservation	
Employed by	Number	Income	Number	Income
Bureau	43	$ 349,391	62	$ 747,408
Tribe	114	579,120	-	-
Private Industry (note a)	35	100,032	46	52,368
Self-employed (note a)	415	1,112,400	37	322,500
Farm laborer (note a)	1,295	1,374,635	250	270,000
Total	1,902	$3,515,578	395	$1,392,276

a/Includes part-time employees.

In addition to the income from employment, the Indian landowners on the Gila River and Yakima reservations received $2.4 million of cropland rental income.

CROPLAND MANAGEMENT OBJECTIVES

Various Bureau programs help the Indian people farm and lease their lands. The Bureau's policy is to construct and manage irrigation facilities for the just and equitable distribution of water to Indian lands. Nineteen reservations have major Bureau-financed irrigation projects. During fiscal year 1973, the Bureau budgeted $18 million for constructing irrigation projects and $1.6 million for project operations and maintenance.

Technical assistance for managing and leasing croplands is provided by the Bureau's soil and water conservation, agricultural extension, and real property management and appraisal programs. The cost for this agricultural technical assistance is not readily determinable because these programs also provide technical assistance for the management of nonagricultural land and other Indian resources. Total cost for these programs, which are intended to help the Indians conserve, restore, and improve the land and receive fair returns from their use or lease, was $20.5 million during fiscal year 1973.

NEED TO DEVELOP AN IRRIGATION MANAGEMENT SERVICES PROGRAM

The Bureau needs to identify reservation lands served by Bureau irrigation projects which could benefit from irrigation management services (IMS) and plan and provide guidance for implementing IMS programs. The Bureau of Reclamation (BR) defines IMS as a series of practices which would improve irrigation efficiency, such as irrigation scheduling, water runoff recovery, and farm facility improvements. IMS would not only distribute limited supplies of water to more agricultural lands but would minimize the deterioration of productive agricultural lands by a rising water table. 1/

Since 1969 BR has begun IMS in 17 irrigation districts. The Office of Management and Budget provided additional momentum in 1973, when it directed BR to place greater emphasis on improved water management and irrigation efficiency in its planning and operations. The National Water Commission, in its report to the President and to the Congress in June 1973, also voiced a need for this type of program. Various BR and other studies concluded IMS would allow farmers to reduce water use and the acreage affected by a rising water table. IMS is expected to increase irrigation efficiency about 20 percent annually at a cost of $8 an acre.

Despite the apparent benefits IMS offers, the Bureau has not started such a program. Bureau headquarters officials said the Bureau has not provided any guidance or direction to promote or plan for IMS, because IMS probably was not needed on its irrigation projects. They stated that they had not fully explored BR's efforts to develop IMS and expressed doubts whether farmers would cooperate in implementing an IMS program.

On the Yakima reservation, IMS could increase the amount of land used for farming. A Bureau official stated that the irrigation project does not have IMS because the project's responsibility is limited to water delivery and does not include water use management.

Productivity on 10,500 acres out of 154,800 acres of Yakima cropland has already been adversely affected by a rising water table, and about 300 additional acres are

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1/A rising water table may increase soil salinity and harm crop root structures.

being affected each year. Bureau and Soil Conservation Service (SCS) 1/ personnel attributed this, partially, to overapplication of irrigation water.

A 1969 Bureau study estimated that annual rent for 2,282 acres of affected Yakima croplands could increase by $66,520, if the land were reclaimed. Furthermore, rental income could be expected to decrease if the present rate of land deterioration were allowed to continue. According to an agency official, some of this land was formerly used to grow hops and annually rented for over $50 an acre. Now these same lands are suitable only as pasture and rent for about $2 an acre.

The study also stated that water management by the farmers was needed to help alleviate the problem and that the irrigation project, Bureau, SCS, and the State extention service should develop a management plan. The State extension service started a plan but never completed or implemented it because, according to a Bureau official, the farmers did not believe they were over irrigating and did not want to incur the additional labor and recordkeeping costs associated with such a plan.

An alternative to IMS on the Yakima reservation would be a drainage project to lower the area's water table. It would cost substantially more than IMS, however. During 1970 and 1971, 934 acres were drained at about $125 per acre. A Bureau official estimated current drainage cost to be nearly $200 per acre.

On the Gila River reservation during 1973, only 13,083 acres of the 50,500-acre Indian portion of the San Carlos Irrigation Project received water. These lands produced about $4.4 million of agricultural products. Bureau officials advised that the Bureau was not planning or developing a reservation IMS program because it and the tribe have been concentrating their efforts on obtaining additional irrigation waters. They believed, however, that IMS could stretch existing water supplies to irrigate substantially more acres of Indian croplands.

Despite certain tribes' beliefs and the Bureau's inaction, the Colorado River Tribal Council recognized the benefits of IMS as a means of improving their agricultural economy. In 1973, the tribe, Bureau, and BR entered into an agreement to implement IMS on the Colorado River Irrigation Project.

1/Department of Agriculture.

Bureau officials stated that the tribe encouraged IMS because almost all of its available water was being used on 62,000 acres out of 103,000 acres of irrigable lands. IMS has the potential to stretch existing water supplies to an additional 28,000 acres of reservation land by 1978.

Conclusion

We believe that an IMS program would improve the efficiency of Indian irrigation projects. In addition to distributing limited supplies of water to more land, an IMS program could minimize the deterioration of productive agricultural land by a rising water table.

Recommendations to the Secretary of the Interior

We recommend that the Secretary of the Interior direct the Bureau to work with Indian tribes and the Bureau of Reclamation to (1) identify reservation lands served by Bureau irrigation projects which would most benefit from IMS and (2) plan and provide guidance to implement IMS on those reservations.

Agency comments

The Bureau agreed in principal with our recommendation to identify reservations which can benefit from an irrigation management system. It pointed out, however, that many Indian irrigation projects provide only marginal benefits to Indians because the land is used predominantly by non-Indians. The Bureau believes that this factor must also be considered in formulating recommendations for irrigation management systems.

NEED TO STRENGTHEN AGRICULTURAL LEASE PROCEDURES

The Bureau needs to develop lease procedures and terms which insure that Indian landowners do not forego rental income for land improvements made by the renter but financed with Federal grants. These improvements have included such things as land leveling, ground water drainage, and improving water distribution systems. In some instances Indians accepted less than fair rental value for their agricultural lands to help finance land improvements made by the renter. Later, some of the renters received grants from the Agricultural Stabilization and Conservation Service (ASCS), Department of Agriculture, for making these land improvements.

On the Yakima reservation, 22 agricultural leases were made in which the renter received ASCS land conservation

improvement grants in 1973 and 1974. We identified five leases under which the Indian landowners will forego up to $24,800 in rent to help finance land improvements. After entering into the leases, the renters received nearly $6,900 from ASCS for these same improvements. For example:

--In 1974, the Bureau determined that 79.5 acres should rent for $3,650 a year. The approved 10-year lease provided for an annual rent of $3,350 and included water distribution system improvements to be made by the renter for an estimated cost of $4,000. The Indian landowners would forego $300 of rental income annually for a total of $3,000 during the 10-year lease. After the water distribution system improvements were made, the renter received a grant payment of $2,416 from ASCS to help finance the improvements. The lease file contained no evidence that the Indians knew the renter intended to apply or had applied and received ASCS financial assistance.

However, in one lease on the Yakima reservation, entered into in 1972, the ASCS grant was considered in determining annual rent. The lease provided that, if an ASCS grant was not available to finance the improvements, 32 percent of the estimated improvement cost would be amortized and deducted from the rent. The renter received the ASCS grant in 1974, and the Indian landowners did not have to reduce the rental rate. We were told that this provision occurred as a result of lease negotiations.

Conclusion

We believe the Bureau needs to insure that Indian landowners are not unnecessarily foregoing rental income to finance land improvements made by the renter and financed by Federal grants.

Recommendations to the Secretary of the Interior

We recommend that the Secretary of the Interior direct the Bureau to develop lease procedures and terms to insure that Indians (1) have full and complete knowledge of Federal grants involving their leased land and (2) do not unknowingly forego rental income for improvements made by renters and financed by Federal grants. In this regard, it would seem desirable for the Bureau to seek the assistance or advice of ASCS on the development of such lease procedures.

Agency comments

The Bureau agreed with our recommendation and stated that to insure that the Indian landowners have full knowledge of their land, their options, the Federal cost share programs, etc., each leasing office should have--either as an integral part of the leasing staff or available on an on-call basis--an agricultural specialist who is fully informed about the land and available programs. The Bureau also stated that these specialists should personally (if physically possible) tell the owner(s) about their land and the options available to them so they will be equipped to make intelligent decisions regarding lease proposals.

CHAPTER 6

SCOPE OF REVIEW

We reviewed the forest management activities at the Colville and Yakima reservations in Washington State and the Arizona Fort Apache reservation. We reviewed the rangeland management activities primarily at the Hualapai and Papago reservations in Arizona and did a limited review of the Ute Mountain reservation in Colorado and New Mexico, the Southern Ute reservation in Colorado, the Jicarilla reservation in New Mexico, and the Fort Belknap and Northern Cheyenne reservations in Montana. Cropland management was reviewed at the Gila River reservation in Arizona and the Yakima reservation in Washington. We also made our review at, in addition to the applicable agency offices, the Bureau headquarters office in Washington, D.C., and area offices in Portland, Phoenix, and Albuquerque.

We reviewed applicable laws and regulations and the Bureau's policies, procedures, and practices relating to the forest, range, and cropland management activities. We also discussed the management of these resources with tribal officials and with Bureau officials at the headquarters, area, and agency offices.

79-324 O - 76 - 5

APPENDIX I

HENRY M. JACKSON, WASH., CHAIRMAN
[illegible] BIBLE, NEV.
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United States Senate
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
WASHINGTON, D.C. 20510

June 11, 1974

The Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Comptroller General:

As you know, due to the ever increasing demand for energy fuels, the United States is currently experiencing a fuel shortage. Also, to varying degrees, the Nation is experiencing shortages of certain agricultural and meat products, timber for home construction and other commercial purposes, and other mineral resources.

The American Indians, who have long been considered to be among the most disadvantaged Americans, have significant land and natural resources which, if properly developed, could play a significant role in contributing toward a reduction in these shortages and at the same time provide much needed employment, income, and economic development for the Indian people. For example, Indian lands contain nearly 44 million acres of range land, 13 million acres of forests, and 1.2 million acres of cropland. Also, a recent newspaper article stated that over two dozen Indian reservations contain significant reserves of oil, gas, coal, uranium, oil shale, tar sands, and geothermal resource potential. The article further noted that other reservations contain deposits of copper, tungsten, iron, gold, silver, phosphate, asbestos, and limestone.

The Committee is concerned about the energy, mineral, food, and timber shortages facing the Nation and the need to develop our domestic resources. Therefore, I

APPENDIX I

would appreciate it if you would undertake a review of the efforts of the Bureau of Indian Affairs to encourage the development of the natural resources on Indian reservations and, which at the same time, could provide the Indian people with much needed employment, income and economic development.

You may disclose that your review is being made at the request of the Committee and you may obtain agency comments on your report.

The Committee and its staff stand ready to assist you in your efforts.

Sincerely yours,

Henry M. Jackson
Chairman

HMJ/fgh

APPENDIX II

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JUL 15 1975

Mr. Henry Eschwege
Director, Resources and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

This responds to your April 25, 1975, request for comments on the GAO draft, "Indian Natural Resources--Opportunities for Improved Management and Increased Productivity." Your report makes many valid points. BIA's editorial suggestions were furnished previously.

Comments on the GAO recommendations follow:

Management of Indian Forest Land. BIA and the Department agree with your point that the level of effort needed to meet the objectives of sustained yield and to achieve an allowable cut should be determined. A study is now underway on an agency-by-agency basis to do just that, and the Congress will be notified of the results. However, there is no commitment at this time to seek additional Federal appropriations for such purposes. In some situations, the tribe may have the resources and may be the logical party to assume the financial burden, particularly where the potential additional revenue is substantially in excess of the added cost required.

With respect to the recommendations appearing on pages 37 and 38 of the draft report:

1. BIA agrees that the viability of forest management techniques should be assessed, that long-range plans for eliminating the backlog of needed forest management work should be developed, and that salvage plans for harvesting dead and dying timber are needed. These actions will be accomplished if adequate resources can be made available.

2. BIA believes that existing guidelines for use of the 10 percent funds are basically sound. The examples of questionable use of such funds were caused by inadequate administration and application of guidelines. Area and agency offices will be directed to adhere to the guidelines in the future.

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3. As previously mentioned, a study is now in process to determine additional staffing needs. The appropriate congressional committees will be informed. But as stated before, there is no commitment to seek additional Federal appropriations.

4. BIA concurs in periodically evaluating the effectiveness of its efforts in increasing timber production and will report the results in its budget justifications.

Management of Indian Rangeland. Your description of Indian rangeland problems is accurate. The outlook for improvement, however, is not optimistic for those reservations which will not implement and enforce a grazing permit system based on proper stocking levels. As your report observes, BIA has been trying for years to persuade certain tribes to use sound grazing practices, but without success. Apparently, tribal culture and tradition are more important than conservation of the land and improved economic return. Viewing the situation objectively, there is no reason to expect a reversal of past practices. Fortunately, most tribes are using a sound grazing permit system.

BIA endorses the GAO recommendations appearing on page 63. Current plans include:

1. An appraisal of ongoing soil and range inventory effort will be made in order to program completion, on a priority basis, at the earliest possible date.

2. Every effort will be made to free range conservationists from the ministerial duties (many of which are clerical in nature) of range permits in order for them to spend full time on making inventories and in management planning.

3. Grazing permit systems that are in operation will be continued, as will efforts to improve those systems.

4. Comprehensive management plans will be required as justification of budget requests for improvement funds. Improvements must be based on need and must be compatible with physical location.

5. Requests for donated feed grain will be carefully evaluated when received. They will be forwarded for approval only for those reservations that have adopted and are in compliance with a comprehensive management plan. The management plan must include an enforceable range permit system.

Management of Indian Croplands. BIA agrees in principal with your recommendation on page 69 to identify reservations which can benefit from an irrigation management system. But for the same reasons discussed under

Management of Indian Forest Land, there can be no commitment to seek Federal appropriations for such purposes. Many Indian irrigation projects provide only marginal benefits to Indians because the land is used predominantly by non-Indians. This factor must also be considered in formulating recommendations.

BIA also agrees with your recommendation on page 71. In order to insure that the Indian landowners have full knowledge of their land, their options, Federal cost share programs, etc., each leasing office should have, either as an integral part of the leasing staff or available on an on-call basis, an agricultural specialist who is fully informed regarding the land and available programs. That specialist should personally (if physically possible) inform the owner(s) about their land and the options available to them in order to equip them to make intelligent decisions regarding lease proposals.

We appreciate the opportunity to comment on your draft report.

Sincerely,

Director of Audit and Investigation

GAO note: Page number references in this appendix (37, 38, 63, 69, and 71) are pages 27, 28, 46, 52, and 53 in this report.

REPORT TO THE SENATE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS BY THE COMPTROLLER GENERAL OF THE UNITED STATES

Indian Natural Resources--Part II: Coal, Oil, And Gas Better Management Can Improve Development And Increase Indian Income And Employment

Department of the Interior

The development of Indian mineral resources for the benefit of American Indians has been hindered by

- --lack of resource inventories, mineral management plans, and mineral expertise within the Bureau of Indian Affairs,
- --no means to determine if Indian preference in hiring lease provisions are effective,
- --failure to establish a coal lease royalty rate based on the selling price of coal,
- --inadequate monitoring of lease terms after issuance of a lease.

This report makes numerous recommendations to help overcome these problems and improve the management of mineral resources to increase the economic benefits to the Indian people and help the Nation meet its energy needs.

RED-76-84

MARCH 31, 1976

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-114868

The Honorable Henry M. Jackson, Chairman
Committee on Interior and Insular Affairs
United States Senate

Dear Mr. Chairman:

This report describes opportunities for the Department of the Interior to improve development of mineral resources and increase Indian income and employment through better management of coal, oil, and gas resources on Indian reservations. We made this review pursuant to your June 11, 1974, request, as modified by subsequent discussions with your office in February 1975.

You asked us to review the Bureau of Indian Affairs' efforts to help Indians develop their natural resources, provide much needed employment to Indians, and help reduce our Nation's shortages of food and raw material. This report covers our review on seven Indian reservations of three major nonrenewable resources--coal, oil, and gas. Our report on the three major renewable resources, "Indian Natural Resources--Opportunities For Improved Management And Increased Productivity, Part I: Forest Land, Rangeland, And Cropland" (RED-76-8), was issued to the Committee on August 18, 1975.

In accordance with a request from your office, we have not obtained written agency comments. However, we have informally discussed our findings with agency officials.

This report contains recommendations to the Secretary of the Interior. Section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report. We will be in touch with your office in the near future to arrange for the release of the report so that the requirements of section 236 can be set in motion.

Sincerely yours,

Comptroller General
of the United States

Contents

		Page
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Significance of Indian coal, oil, and gas resources	1
	Responsibilities and objectives for managing Indian mineral resources	2
2	OPPORTUNITIES TO IMPROVE DEVELOPMENT OF MINERAL RESOURCES ON INDIAN RESERVATIONS	6
	Need for data on resources on Indian lands	6
	Need for mineral resource management plans	8
	Lack of minerals expertise in BIA	9
	Central office expertise	10
	Area office expertise	10
	Agency office expertise	11
	Need for procedures to exchange mineral resource data	12
	Conclusions	14
	Recommendations to the Secretary of the Interior	14
3	OPPORTUNITIES TO INCREASE INDIAN EMPLOYMENT IN THE MINERALS INDUSTRY	16
	BIA objective for Indian employment	16
	Opportunities to increase Indian employment in the minerals industry	17
	Conclusions	20
	Recommendations to the Secretary of the Interior	21
4	OPPORTUNITIES TO IMPROVE COAL-LEASE TERMS	22
	Responsibilities and objectives for leasing Indian mineral resources	22
	Royalty rates should be based on the selling price of coal	22
	Coal-lease acreage limitation needs to be reevaluated	24
	Conclusions	26
	Recommendations to the Secretary of the Interior	27

79-324 O - 76 - 6

		Page
5	OPPORTUNITIES TO IMPROVE LEASE MANAGEMENT	28
	USGS responsibilities for Indian mineral leasing	28
	Lack of monitoring and enforcement of lease provisions	28
	Required inspections not performed	29
	Late royalty payments and penalties	31
	Production and sales reports not received by USGS, nonproduction not verified, and postaudits not performed	33
	USGS should coordinate reclamation activities	35
	Conclusions	37
	Recommendations to the Secretary of the Interior	38
6	SCOPE OF REVIEW	39
APPENDIX		
I	Letter dated June 11, 1974, from the Chairman, Senate Committee on Interior and Insular Affairs	40

ABBREVIATIONS

BIA	Bureau of Indian Affairs
BOM	Bureau of Mines
GAO	General Accounting Office
USGS	United States Geological Survey

COMPTROLLER GENERAL'S
REPORT TO THE COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
UNITED STATES SENATE

INDIAN NATURAL RESOURCES--PART II: COAL, OIL, AND GAS--BETTER MANAGEMENT CAN IMPROVE DEVELOPMENT AND INCREASE INDIAN INCOME AND EMPLOYMENT

Department of the Interior

D I G E S T

Coal, oil, and gas are valuable resources that provide Indians with income and job opportunities which will increase as resources are further developed.

Indian income from oil and gas in fiscal year 1974 amounted to about $43.1 million. Indian income from other minerals, including a large amount from coal, amounted to about $9.6 million during the same period.

There are opportunities to improve development of mineral resources, increase the economic benefits to the Indian people, and provide the Nation with increased energy sources. Such development can provide needed jobs and income to Indians living on or near reservations, a group with a high rate of unemployment.

The Bureau of Indian Affairs has placed limited emphasis on developing Indian coal, oil, and gas resources. For example (1) the amount of mineral resources on most reservations is unknown, (2) planning for minerals resource development has not been adequate, (3) the Bureau does not have sufficient personnel with minerals expertise, and (4) information on experience gained during minerals development has not been exchanged among Bureau field offices.

To improve development of mineral resources, the Secretary of the Interior should direct the Commissioner of the Bureau of Indian Affairs to:

--Develop complete minerals inventories for all reservations having such resources.

--Develop, through use of available resource information, mineral management plans taking into consideration the wishes of the Indian people, and update these plans as additional information becomes available.

--Determine the mineral expertise staffing the Bureau needs to adequately fulfill its trust responsibilities at its headquarters and field

locations and take the steps necessary to meet these needs. If it is not feasible to have mineral experts at all mineral developing reservations, alternatives should be considered such as using a minerals task force or consultants.

--Establish procedures to exchange and distribute between area and agency offices information relating to experience gained by the tribes in developing mineral resources.

--Update and maintain the Bureau's operations manual and expedite revisions to the Code of Federal Regulations when changes are necessary. (See pp. 14 and 15.)

Indian employment in the mineral industry was substantially higher on those reservations GAO visited that had established specific requirements for Indian preference in hiring and followup procedures.

To increase Indian employment in the minerals industry, the Secretary of the Interior should direct the Commissioner of the Bureau of Indian Affairs to:

--Establish specific requirements in all Indian mineral leases for Indian preference in hiring as well as procedures for lessees to regularly report to the Bureau and the tribes on the status of Indian employment.

--Establish procedures for either the Bureau or the tribe to insure that Indian preference in hiring provisions and requirements are being followed. (See p. 21.)

Thirteen of the 16 Indian coal leases GAO reviewed had fixed royalty rates and, therefore, the income per ton produced did not rise during periods of rising coal prices. Also, the Bureau had, in many cases, leased in excess of a 2,560-acre limitation, provided in the Code of Federal Regulations, without adequately documenting the reasons for approving the excess.

To help insure that the Indian people benefit from the increasing value of their coal resources and to improve coal-lease management, the Secretary of the Interior should direct the Commissioner of the Bureau of Indian Affairs to:

--Establish a coal-lease royalty rate policy based on a percentage of the selling price of coal, with a fixed amount (floor) below which the price cannot fall.

--Determine whether the 2,560-acre limitation and the criteria for exceeding the limitation are valid; if it is found that they are no longer valid, act to revise the Code of Federal Regulations accordingly. In making this determination, factors to be considered in determining the number of acres to be leased should be identified. This recommendation should be carried out with the assistance of the Geological Survey.

--Insure that the Bureau's lease files are adequately documented to support all actions. (See p. 27.)

The Geological Survey has not adequately fulfilled its responsibilities for mineral resource development on Indian reservations. For example, it has not (1) performed all required oil and gas lease site inspections, (2) properly monitored royalty payments and operating reports, (3) verified lessee reports that oil and gas wells are not producing, and (4) postaudited most lease accounts to insure that Indians receive all royalties due.

To improve Geological Survey management of leases for Indian mineral lands the Secretary of the Interior should require the Director of Geological Survey to:

--Establish a penalty fee for late payment of royalties and enforce such requirements as necessary.

--Instruct lessees to submit reports required by Federal regulations and lease terms when they are due and require purchasers of Indian mineral resources to submit reports on products purchased.

--Establish procedures to coordinate reservation reclamation activities among the various agencies involved with this activity on each reservation.

--Determine the staffing level necessary to satisfactorily perform its mineral responsibilities for Indian lands and take the steps necessary to obtain such staffing.

--Require its field offices to verify on a random basis that oil and gas wells reported to be shut down are no longer producing.

--Perform all required oil and gas site inspections.

--Postaudit all Indian oil and gas lease accounts.
(See p. 38.)

At the Committee's request, GAO did not obtain written comments from Interior but the report was informally discussed with agency officials.

CHAPTER 1

INTRODUCTION

At the request of the Chairman, Senate Committee on Interior and Insular Affairs, we have reviewed the management of natural resources on selected Indian reservations. This report presents the results of our review of three major nonrenewable mineral resources--coal, oil, and gas--on seven Indian reservations. (See scope, ch. 6.)

Although we directed our review to the development of coal, oil, and gas resources, many of the problems we identified may relate to other minerals and, accordingly, our recommendations may also relate to other minerals. The results of our review on the management of the three major renewable resources on Indian reservations--timber, rangeland, and croplands--were previously reported to the Committee in our report, "Indian Natural Resources--Opportunities For Improved Management And Increased Productivity Part I: Forest Land, Rangeland, And Cropland" (RED-76-8, Aug. 18, 1975).

SIGNIFICANCE OF INDIAN COAL, OIL, AND GAS RESOURCES

According to the Federal Energy Administration, as a result of a growing population, increasing industrialization, and greater affluence, the U.S. demand for energy has grown at an annual rate of 4 to 5 percent for the past 10 years. U.S. per capita energy consumption is eight times the average of the rest of the world. In 1973 imports of crude oil and petroleum products accounted for 35 percent of total domestic petroleum products consumption.

Since the oil embargo in 1973, the United States has experienced energy shortages and greatly increased prices for energy materials, particularly petroleum products. The embargo also produced an awareness of the potential costs of increased dependence on foreign energy sources. In response to these problems, the President in November 1973 established the goal of U.S. energy independence by 1980. The President has also called for a doubling of coal production by 1985.

Mineral resources such as coal, oil, and gas have been located on Indian reservations. Although the exact amounts of such resources are unknown, the U.S. Geological Survey (USGS), Department of the Interior, estimated that oil and gas resources are on 40 reservations in 17 States. These reservations contain about 39.1 million acres of land. Oil resources on these lands, as of November 1973, were estimated at about 4.2 billion barrels and gas resources at about

17.5 trillion cubic feet. USGS estimates Indian oil and gas reserves to amount to about 3 percent of the Nation's total reserves.

USGS also estimated that 33 reservations in 11 States containing a total of 34.5 million acres, have sizable coal reserves. As of January 1975, USGS estimated that these lands contain from 100 to 200 billion tons of identified coal resources--about 7 to 13 percent of the Nation's identified coal resources of 1,581 billion tons. An October 1975 Federal Trade Commission staff report, "Mineral Leasing on Indian Lands," reported that Indian lands may contain more than one-tenth of the Nation's currently minable coal reserves.

According to the 1970 census, there were about 827,000 Indians in the United States. In 1973 the Bureau of Indian Affairs (BIA), Department of the Interior, estimated that 543,000 Indians were living on or near reservations. Mineral resources development on reservations can thus provide substantial income and employment opportunities to the Indians.

RESPONSIBILITIES AND OBJECTIVES FOR MANAGING INDIAN MINERAL RESOURCES

The Federal Government, as a result of congressional actions and judicial decisions, is obligated to aid American Indians. The Department of the Interior, through BIA, provides services to Indians, including

--working with Indians and other Federal agencies to develop programs to improve Indian economic conditions,

--advising Indian landowners on how to make the most of their resources, and

--exercising trust responsibility for Indian lands.

BIA and USGS share responsibility for managing mineral resources on Indian reservations. BIA, as trustee of Indian land, is responsible for all phases of minerals management through the leasing process. USGS is responsible for certain aspects of the management of minerals on Indian reservations, including

--advising BIA and the Indian people on the adequacy of lease provisions,

--monitoring mineral development operations,

--computing, verifying, and collecting royalties for the Indian people, and

--monitoring reclamation of Indian lands.

Authority for leasing Indian lands for mineral development is contained in 25 United States Code 396 and 396a. Specific objectives for managing mineral resources are included in BIA's "Indian Affairs Manual" (54 IAM, ch. 6) which states,

> "Indian tribes and individual Indians should be encouraged to lease their trust and restricted land for oil and gas development with the aim of obtaining a maximum recovery and income consistent with a sound conservation program."

This section covers oil and gas development; however, BIA instructions also direct that the same objectives apply to other minerals.

BIA and USGS program management of mineral resources is decentralized. BIA's overall organization consists of the central office in Washington, D.C.; area offices; and subordinate field installations (agency offices) located throughout the United States. BIA officials informed us that the authority of the Commissioner of BIA to act on behalf of the Secretary of the Interior regarding Indian mineral resources development has been delegated to BIA area offices and, in most cases, further delegated to BIA agency offices. USGS authority regarding Indian mineral resources also has been delegated to its regional and area offices.

BIA does not impose strict mineral management principles on the Indians; rather, it attempts to get voluntary acceptance of sound mineral management through such means as technical assistance.

The importance of voluntary acceptance was reemphasized in the Indian Self-Determination and Education Assistance Act of January 4, 1975 (Public Law 93-638). This act is intended to provide, among other things:

--Maximum Indian participation in the government and education of the Indian people.

--Full participation of Indian tribes in Government programs and services for Indians.

--A program of assistance to upgrade Indian education.

One of the act's more important features is that it allows tribes to directly contract with BIA for the administration of programs serving them. Also, the Secretary of the Interior is not authorized to enter into any contract which would impair his ability to discharge his trust responsibilities to any Indian tribe or individual. It appears, therefore, that any actions taken regarding mineral resources should have the mutual consent of BIA and the participating tribes.

On January 26, 1976, the Secretary of the Interior announced a new comprehensive Federal coal lease policy to promote the orderly development of public energy resources. The policy, to be implemented on a gradual basis, is designed to:

--Help keep national energy costs down by permitting timely and efficient development of Federal coal by leasing only when needed.

--Provide a balance between national policy requirements for using the Nation's most abundant fossil fuel and preservation of the environment.

--Discourage private holdings of excessive reserves of Federal coal by implementing diligent development regulations requiring timely development or relinquishment.

--Provide for issuance of preference rights leases under a new definition of commercial quantities. (Preference rights leases are issued to prospecting permit holders who show that lands under the permit contain coal in sufficient quantities to support a commercial operation.)

--Return fair market value to the taxpayer through competitive bid sale of coal leases.

--Public participation in the Federal coal decision process.

The Secretary stated that there is no reason for Indian tribes to fear that their coal resources will be developed without their full concurrence and, as trustee for the various tribes, it is the Department's responsibility to insure that Indian desires regarding coal development are met. He said that the Department will approve coal leasing on Indian lands where

--the tribal or individual Indian landowner desires to dispose of the coal;

--the terms and conditions of the lease are in the best interest of the Indian landowner; and

--appropriate environmental protection and reclamation safeguards are imposed on the lessee.

Also, on January 2, 1975, the Congress enacted Public Law 93-580, establishing the American Indian Policy Review Commission. The consensus of the Congress in establishing the Commission was that Indian policy had been shaped by a fragmented approach which inhibited Indian development and did not consistently attempt to achieve Indian self-sufficiency. The Commission's primary purpose is to review the legal and historical background which serves as the basis for the unique relationship between the Indian people and the Federal Government.

The Commission will, among other things, investigate and study

--the relationship between the Federal Government and the Indian tribes and the land and other resources they possess and

--the policies, practices, and structure of the Federal agencies charged with protecting Indian resources and providing services to Indians, including a management study of BIA making use of experts from the public and private sector.

The Commission is expected to issue its final report no later than June 30, 1977.

CHAPTER 2

OPPORTUNITIES TO IMPROVE DEVELOPMENT OF MINERAL RESOURCES ON INDIAN RESERVATIONS

Mineral resources on Indian reservations have provided Indians with substantial amounts of income and job opportunities. Total income, including rents, royalties, and bonuses, from oil and gas resources in fiscal year 1974 amounted to about $43.1 million. Income from other minerals, including a large amount from coal, amounted to about $9.6 million. BIA could not tell us the amount of income relating specifically to coal. Although there was no means to determine the number of Indians employed in the minerals industry on most of the seven reservations in our review, we did identify about 800 Indians employed in the industry earning about $9 million annually. Additional opportunities exist to improve the development of these resources, increase benefits to the Indian people, and at the same time provide additional energy sources.

BIA has placed limited emphasis on developing mineral resources on Indian reservations. We found that

--inventories of mineral resources on Indian reservations do not exist;

--mineral resource development plans have not been prepared;

--expertise within BIA to help Indian tribes develop mineral resources has not been provided; and

--information on minerals development has not been exchanged among BIA offices.

NEED FOR DATA ON RESOURCES ON INDIAN LANDS

On the seven reservations we visited, BIA had not made a complete inventory (estimated amount of reserves) of mineral resources. However, on the Osage Reservation, BIA's agency superintendent said that information on mineral resources was adequate, with the exception of natural gas.

BIA officials said a mineral resources inventory is the starting point for mineral management planning. Such plans provide an appropriate course of action to follow in developing mineral resources. A BIA central office official told us, however, that initial inventory studies were not initiated

until August 1974 because mineral development had been a low priority. A June 27, 1974, BIA memorandum from the Director, Office of Tribal Resources Development, to the Commissioner of BIA stated:

> "Data on the availability of energy resources on Indian lands is urgently needed. It is needed both by our tribal governments and by us in order that the tribes, for economic development reasons, and ourselves, for trust and planning reasons, can intelligently determine priorities, plans and budgets for the development of these resources."

BIA's fiscal year 1975 appropriation included $1 million to conduct a minerals inventory. BIA, USGS, and the Bureau of Mines (BOM) agreed to make an information search and summary of mineral resources on 17 reservations covering about 9.7 million acres of land. The studies were designed to identify, evaluate, and summarize mineral information from published literature, computer data files, and unpublished sources. BIA officials said the initial studies were completed in July 1975 at a cost of about $500,000. Three of the reservations in our review--the Crow, Northern Cheyenne, and Uintah and Ouray Reservations--were included in these studies.

BIA, USGS, and BOM have agreed to continue the minerals inventory project in fiscal year 1976. They will continue the information search and summary on 23 additional reservations, which is to be completed by June 30, 1976, at a cost of about $396,000. Also, USGS and BOM plan to conduct field studies of mineral and energy resources on three reservations. These studies, necessary because existing information is insufficient to assess mineral resources on reservations, will help provide basic information necessary to appraise the mineral potential on the reservations. This work will continue until September 1980. However, it can be terminated by any of the agencies upon a 90-day notice. An annual renewal of the project is subject to agency approval and funds being made available through BIA.

The lack of adequate minerals inventories has contributed to the limited amount of planning for minerals development on reservations. Minerals development has resulted primarily from requests by private industry, rather than from actions by the tribes and BIA. Knowledge of the amount of recoverable resources on the reservations could also benefit the Indians in that companies may offer a higher bonus bid on areas offered for lease if it is known that the acreage contains a large amount of resources. To its credit, in August 1974 BIA initiated a comprehensive inventory study of mineral resources on Indian reservations.

NEED FOR MINERAL RESOURCE MANAGEMENT PLANS

BIA has placed only minor emphasis on planning for mineral resource development. BIA had not developed formal mineral management plans for the reservations we reviewed. However, on the Fort Berthold Reservation BIA did contract with a private firm to conduct a minerals survey and make recommendations on reservation land to be offered for lease. (See pp. 6 and 9.)

BIA has a congressional mandate to manage Indian timber resources through the Indian Reorganization Act of 1934 (25 U.S.C. 466). To insure that all the forest management objectives are met, BIA is required to prepare a timber management plan for each major reservation having commercial timber. This plan specifies the annual allowable harvest of timber and the forest management techniques to be employed.

Similarly, mineral development plans should provide a basis on which Indian people can decide on the approach they wish to take on mineral development and also consider the long-term effects of such development. These plans should include

--alternative development levels,

--socioeconomic impacts,

--cultural impacts, and

--environmental impacts.

The Federal Energy Administration in July 1975 proposed to study Indian mineral resource development and specifically cited the need to establish a management plan for energy resource development on reservations. This recommendation was based on the concerns expressed by the Indian people.

BIA officials said, as previously mentioned, that an inventory is the starting point for planning and that when adequate information on the amount of minerals on Indian reservations is available, they will consider developing mineral management plans. Because of the need for reservation income and employment opportunities, leasing of Indian land containing mineral resources will probably continue without adequate knowledge of the resources. We, therefore, believe that BIA should make plans for mineral development based on the best information available and update these plans as more accurate data becomes available. Such plans must be flexible and must give consideration to the fact that they are based on incomplete resource information.

The lack of mineral development plans has in some cases caused delays in leasing of lands. For example, on the Fort Berthold Reservation, the Tribal Business Council passed a resolution in September 1973 requesting that BIA declare a moratorium on further leasing of lands for oil and gas development on the reservation until a comprehensive plan for oil and gas development could be formulated and approved by the Council. The Chairwoman said that before coal development can proceed, two major conditions must be satisfied--the desires of the Indian people must be determined and a coal management plan must be prepared including adequate information on coal reserves, the effects of coal mining, and alternative methods of development.

In response, BIA contracted with a mineral engineering and planning firm to conduct a survey of the potential for oil and gas on the Fort Berthold Reservation and to recommend which sections of the reservation should first be offered for lease. As a result of the survey, the tribe lifted the moratorium in August 1975. The lack of information resulted in a 23-month delay in minerals development on the reservation.

In addition, the Northern Cheyenne Tribe maintained that it could lose control of its reservation. If all prospecting agreements become mining leases, 56 percent of the reservation would be under lease. Proper planning might have prevented this situation and could have resulted in an awareness of the potential ramifications of uncontrolled development.

The Crow Tribe said it wants coal development; however, it wants to control such development. According to its tribal chairman, the tribe needs time to develop land-use planning, to pass zoning regulations, and to pass tax laws relating to such development. We believe that mineral development planning should include considerations of such factors.

LACK OF MINERALS EXPERTISE IN BIA

BIA central and field office officials said that BIA does not have sufficient minerals expertise. At the BIA central office and field locations we visited, with the exception of the Osage Reservation where BIA has a large minerals staff funded by the tribe, there was a limited number of BIA staff members with minerals expertise. Because of inadequate BIA minerals expertise, assistance provided to the Indian people for minerals development has been limited.

Central office expertise

Although BIA's authority for minerals management has been delegated to its field offices, we were informed that the central office makes policy and continues to provide its field offices with guidance and assistance. BIA central office officials said that in many cases, area offices realize they lack the necessary expertise and request their assistance. We were also told, however, that the central office mineral section is not sufficiently staffed to provide adequate support to its field offices. The BIA central office minerals section consists of one minerals expert and secretarial staff. BIA is attempting to hire an additional minerals specialist to work in the central office, which should increase the level of assistance and guidance provided its field offices.

BIA central office officials said central office direction to its field offices is provided mainly through title 25 of the Code of Federal Regulations. Guidance is also provided through the BIA manual (54 IAM, ch. 6), memorandums, and day-to-day telephone conversations with field offices. The officials acknowledge that BIA's manual is outdated and inadequate. They said that the lack of staff has prevented updating of the manual and has caused delays in making necessary revisions to the Code of Federal Regulations. For example, we were told that personnel shortages contributed to central office delays of up to 4 years to process changes to Osage oil and gas leasing regulations (25 CFR 183--Leasing of Osage Reservation Lands for Oil and Gas Mining).

It is essential that BIA's central office provide overall leadership, guidance, and technical assistance to its field offices so that these offices can effectively carry out their trust responsibilities for Indian mineral resource development. At a minimum, the central office should update and maintain its operations manual which provides instructions to field offices and also revise the Code of Federal Regulations when changes are necessary. It is particularly important for the central office to take the lead in developing objectives, policies, and general procedures for the development of Indian mineral resources because of the general lack of BIA field expertise in the minerals area.

Area office expertise

Of the six BIA area offices we reviewed which have responsibility for the reservations, five had delegated their minerals management authority to the agency offices. The remaining area office retained responsibility for mineral management, but the agency offices provide assistance for

monitoring reclamation efforts. The minerals section of this area office is staffed with one professional and three clerical employees. In July 1975 area office officials told us additional staff was needed. They stated that four additional professional staff members and clerical support were necessary to handle the present workload. We were told that the central office had previously rejected requests for more minerals staff because funds had not been available; therefore, they had not requested additional staff in recent years.

One of the area offices without mineral expertise had a minerals officer position authorized since November 1972; however, we were told that it had not been filled because of budget cutbacks. The area office requested this position because one tribe had expressed the need for BIA coal expertise to assist them in managing mineral development. BIA central office officials in the budget office said that BIA's employment ceiling, as established by the Office of Management and Budget, is generally lower than the number of positions authorized by the Congress, thereby making it difficult to fill all authorized positions.

Agency office expertise

At five of the six agency offices we visited that had been delegated authority for minerals management, BIA, by its own admission, does not have adequate minerals expertise. Minerals management is, generally, carried out by staff without formal minerals training. The BIA Osage Agency Office, however, had a minerals staff consisting of petroleum engineers and engineering technicians.

We noted during our review that, at the reservation level, BIA had concentrated considerably more staff on management of forestry, rangeland, and cropland than on minerals. For example, at the Navajo Reservation BIA had 15 employees assigned to forestry, 24 to rangeland, and 65 to cropland activities on a permanent basis as of June 30, 1974; the income from these resources amounted to about $5.8, $13.8, and $2.7 million for fiscal year 1974, respectively. BIA had only four staff members assigned to minerals activity with related income of about $11.5 million in fiscal year 1974. On the Jicarilla Reservation, BIA had two employees assigned to minerals activities, with income of about $2.3 million in fiscal year 1974. During the same period BIA assigned nine staff members to forestry, with income of about $258, and eight to rangeland activities, with income amounting to about $498,000.

One BIA official said a task force approach, with experts assisting the field with minerals management, may be the most feasible method to overcome the lack of expertise problem.

79-324 O - 76 - 7

BIA should give the task force approach more consideration. Although it seems unlikely that this approach would be workable on reservations with large amounts of resources and resource development, it may be the solution for reservations with limited mineral resource development. Such a task force would include petroleum and mining engineers, reclamation experts, and other experts necessary to cover all phases of minerals development. On reservations with a lot of development activity, we believe BIA needs a permanent staff of minerals experts to provide ongoing technical assistance and to carry out its trust responsibilities.

NEED FOR PROCEDURES TO EXCHANGE MINERAL RESOURCE DATA

BIA does not have formal procedures to regularly provide relevant mineral data relating to experience gained in the development process to field offices and/or Indian tribes. Such information would help most Indian tribes in the early stages of mineral resource development. The October 1975 Federal Trade Commission staff report on mineral leasing on Indian lands also made this observation.

BIA officials on the seven reservations we visited were not aware of important mineral development activities that had occurred on other reservations. They thought that a system to provide this type of information would be beneficial. A BIA official on the Osage Reservation said such a system would be helpful and added that he has been encouraging BIA to develop an information exchange system for more than 4 years.

Following are examples of the types of information we believe should be made available to other tribes.

--The Navajo Tribe increased income by receiving royalty rates based on a percentage of the selling price of coal in 1964, rather than on a fixed rate per ton of coal.

--The USGS office responsible for assisting the Navajo Reservation was converting prospecting data upon request to reserve figures for use in more accurately determining the amount of coal on the Navajo Reservation.

--BIA Osage officials are planning for the second and third phases of oil development to avoid ruining an oilfield.

--The Navajo Tribe has increased Indian employment by monitoring and insuring that Indian preference in hiring is being followed.

BIA Navajo Area Office officials told us that, although formal procedures to exchange mineral development information do not exist, the BIA central office encourages the informal exchange of such information with other area offices. However, this system has not always been effective. For example, in 1964 the Navajo established a royalty rate whereby the royalties increased as the selling price of coal increased. The Crow and Northern Cheyenne Tribes had coal-lease sales from 1966 through 1971; however, lease terms for both of these tribes provided for a fixed royalty rate. An official of the BIA area office responsible for the Crow and Northern Cheyenne Reservations said he depends on the BIA central office and USGS for guidance on such matters and, therefore, did not contact the Navajo or any other area office. A BIA headquarters official said fixed royalty rates were approved on the Crow and Northern Cheyenne Reservations because of (1) tribal pressure to develop reservation resources as soon as possible and (2) the lack of BIA experience in dealing with coal companies. Had the BIA area office responsible for the Crow and Northern Cheyenne Reservations been aware of the royalty rate concept based on the selling price of coal, it could have asked the central office to consider this concept in negotiating the coal leases.

BIA central office officials said they do not favor establishing a system to provide mineral development information to the various tribes. They said such a system may cause problems because tribes may believe that what has been obtained on one reservation could be obtained on their reservations without giving consideration to differing circumstances. They stated that this could force mineral companies not to develop minerals on a reservation. Also, some tribes, they added, may not want other tribes to have information about development on their reservation. The officials further stated that it would be difficult and expensive to establish such a system.

BIA should make pertinent information available to the various area and agency offices responsible for assisting reservations with mineral development potential. The BIA central office could coordinate the dissemination of data and act as the central clearing point to avoid some of the problems identified by BIA central office officials. Information distributed could include data on the tribes plan for developing their resources, lease provisions, and obstacles encountered.

CONCLUSIONS

Opportunities exist to improve development of mineral resources, increase Indian income and employment opportunities, and help alleviate the Nation's energy problems through improved BIA management of Indian coal, oil, and gas resources. Limited emphasis has been placed on developing these resources. Consequently, (1) the amount of mineral resources on most reservations is unknown, (2) planning for minerals resource development has not been adequate, (3) BIA does not have sufficient personnel with minerals expertise, (4) information on experience gained during minerals development has not been exchanged among the BIA field offices, and (5) revisions to BIA operations manual and applicable sections of the Code of Federal Regulations are not being made in a timely manner.

The development of Indian mineral resources has, generally, resulted from requests by the mineral industry rather than from action by BIA or the tribes. Also, mineral development has been delayed in some cases because the tribes were dissatisfied with the amount of data available.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To help improve development of Indian mineral resources, we recommend that the Secretary of the Interior direct the Commissioner of BIA to:

--Develop complete minerals inventories for all reservations having such resources.

--Develop, through the use of available resource information, mineral management plans taking into consideration the wishes of the Indian people, and update these plans as additional information becomes available.

--Determine the mineral expertise staffing BIA needs to adequately fulfill its trust responsibilities at its headquarters and field locations and take the steps necessary to meet these needs. If it is not feasible to have mineral experts at all mineral developing reservations, alternatives should be considered such as using a minerals task force or consultants.

--Establish procedures to exchange and distribute between area and agency offices information relating to experience gained by the tribes in developing mineral resources.

--Update and maintain its operations manual and expedite revisions to the Code of Federal Regulations when changes are necessary.

CHAPTER 3

OPPORTUNITIES TO INCREASE INDIAN EMPLOYMENT IN THE MINERALS INDUSTRY

The high rate of unemployment among Indians living on or near reservations makes job development a priority need of the Indian people. Leasing Indian land for the development of mineral resources provides the opportunity for Indian employment. Companies leasing Indian land for minerals development are usually required under the terms of the lease to give Indians employment preference in the development of these resources.

However, neither BIA nor the tribes were in a position to determine whether the Indian preference in hiring provisions were effective. We believe that, by establishing (1) specific requirements for Indian preference in hiring and (2) procedures to require the lessee to regularly report to BIA and the tribes on their employment of Indians on the reservation, BIA and the tribes would be better able to determine if lessees are complying with the Indian preference in hiring provisions. Such requirements could also help BIA and the tribes identify specific reasons for Indian unemployment. There was substantial Indian employment in the minerals industry on those reservations we visited that had specific requirements for Indian employment and had appropriate followup procedures. On the other hand, reservations without these requirements and followup procedures had only minimal Indian employment or the number of Indians employed was not known.

BIA OBJECTIVE FOR INDIAN EMPLOYMENT

A primary BIA objective is to help Indians obtain a level of per capita income and employment that is at least equal to that of their non-Indian neighbors. In its fiscal year 1976 budget justifications, BIA stated that development of job- and income-producing opportunities is essential if Indian employment and income problems are to be improved.

BIA reported that the nationwide unemployment rate for Indians living on or near reservations was about 39 percent in 1974. The unemployment rate on the reservations included in our review ranged from 16 to 35 percent, as follows:

Reservation	Unemployment rate (percent)
Navajo	35
Fort Berthold	26
Crow	27
Northern Cheyenne	27
Jicarilla	34
Uintah and Ouray	27
Osage	16

For the same period, the Bureau of Labor Statistics reported that the total U.S. civilian labor force unemployment rate averaged about 5.6 percent. The unemployment rate for the States in which the reservations we reviewed are located ranged from 4.4 percent in Oklahoma to 6.7 percent in Montana. These statistics, however, are not entirely comparable to those available for reservation Indians, because persons not seeking work are included in BIA estimates and their inclusion results in a higher unemployment rate. However, BIA estimates do indicate the comparatively high level of Indian unemployment.

BIA and tribal officials said the following factors contributed to high unemployment on Indian reservations:

--Lack of qualified Indian workers.

--Reluctance to hire Indians.

--Problem of commuting long distances to work.

--Reluctance of Indians to work for petroleum companies.

--Reluctance of Indians to leave the reservation for employment.

--Lack of adequate communicative skills.

--Poor Indian attitude toward employment.

However, BIA did not know how much these factors contributed to Indian unemployment.

OPPORTUNITIES TO INCREASE INDIAN EMPLOYMENT IN THE MINERALS INDUSTRY

At the seven reservations we visited, BIA did not determine if lessees had complied with Indian preference hiring provisions. However, tribes at two reservations--the Navajo

and Crow--had established procedures to insure that these provisions were being followed, and Indian employment in the minerals industry was significantly higher on these reservations.

Lease provisions for Indian preference in hiring vary; however, the requirements contained in the Jicarilla Tribe's leases are typical:

> "Jicarilla Apaches shall be employed in such mining, drilling, exploration and development operations to the fullest extent that their qualifications and the law permits, and every reasonable effort will be made to train Jicarilla Apaches in the skills and abilities required ***."

We examined 27 prospecting permits and 33 leases for coal, oil, and gas development issued on the 7 reservations. Except for six leases on the Osage Reservation, all of the prospecting permits and leases included an Indian hiring preference provision. BIA Osage Agency Office officials indicated that Indian preference in hiring provisions had not been included in their leases because there was no problem with oil and gas operators hiring Indians on the reservation.

The coal leases we reviewed also stated that no nonmember of the tribe shall be hired until 48 hours after the delivery of notice to the tribe of a job opening. The oil and gas leases containing hiring preference provisions did not include such requirements.

BIA has not developed specific procedures to determine if lessees are complying with Indian hiring preference. However, certain procedures to assist Indians in obtaining employment in the minerals industry were being followed. For example:

--BIA advertised job openings in a local newspaper when notified by a coal company of an opening. (BIA did not, however, follow up to determine if the openings were filled by Indians.)

--BIA informally contacted oil and gas company officials to determine job availability.

We believe that these practices provide some assistance to Indians seeking employment in the minerals industry. They do not, however, provide adequate assurance that Indian workers are being provided employment opportunities. Procedures established by the Navajo and Crow Tribes are good examples of the types of procedures needed to help insure Indian hiring preference. The Navajo requirements include that:

--Coal companies establish goals to achieve relating to the number of Indian supervisors.

--Evaluations of the potential of nonmanagement Indian employees be performed by the coal companies at least once a year.

--Coal companies notify the tribe of any new hirings, promotions, and terminations within 5 working days of the action.

--Coal companies allow the tribe 10 working days to provide Indian candidates for permanent jobs.

--Training programs be developed.

On the Crow Reservation, procedures to insure Indian hiring include that:

--Monthly meetings be held between the tribe and coal company to discuss employment problems and potential vacancies.

--The coal company send weekly reports to the tribe showing the number of Indian staff days of labor scheduled for the week and Indian absenteeism.

--Indians, accepted by the coal company, be admitted for union membership.

--No nonmember of the Crow Tribe be hired until 48 hours after the tribe has been notified of the opening.

BIA central office officials said procedures to insure that lessees comply with Indian preference in hiring lease provisions have not been established but agreed that such action would be helpful. The officials added that limited manpower and funding make it difficult for BIA to institute such a program. The officials told us that it would be more effective to involve the tribes in such a program, which would also be consistent with the concept of Indian self-determination. If a tribe has the resources and ability to monitor the Indian preference in hiring procedures, BIA should encourage and assist them in doing so; otherwise, BIA should assume this responsibility.

We believe that the procedures used by the Navajo and Crow Tribes to help insure compliance with Indian preference in hiring lease provisions have helped increase Indian employment. Indian employment in the coal industry on these reservations averaged about 54 percent of the total coal industry

employment on the reservations during 1974. On the Navajo Reservation 1,313 persons were employed in the coal industry, 712 of whom were Indians with annual earnings totaling approximately $8.2 million. On the Crow Reservation it is estimated that 55 to 60 percent of the 90 employees in the minerals industry are Crow Indians.

Of the other five reservations which had no procedures to assure Indian hiring preference, the Northern Cheyenne and Fort Berthold Reservations, which we visited relative to coal development, were not yet in the production stage. On the three reservations we visited relative to oil and gas development--Osage, Jicarilla, and Uintah and Ouray--accurate figures on the number of people employed were not available. State employment officials from New Mexico, Utah, and Oklahoma and various BIA and tribal officials did not know the number of Indians employed in the minerals industry. However, they indicated that it was minimal on the Jicarilla and Uintah and Ouray Reservations. On the Osage Reservation there were varying opinions as to the number of Indians employed.

Some BIA agency office officials indicated that procedures to assure Indian preference in hiring had not been established because there was no problem with employers not hiring Indians on the reservation. However, these officials could not determine the number of Indians employed on the reservation by the minerals industry or the number of jobs available. One official of a major oil company said he thought that reports to the tribe or BIA on job vacancies and the number of Indians working would assist his company in hiring Indians.

CONCLUSIONS

Indian employment in the minerals industry was substantial on the reservations we visited that had established specific requirements for Indian preference in hiring. In contrast, Indian minerals industry employment on those reservations not requiring companies to follow procedures, such as notifying the tribe in 5 working days of any new hirings, promotions, or terminations, was minimal or the number of Indians employed was not known. Except for the Navajo and Crow Tribes, which had their own procedures to insure compliance with Indian preference in hiring lease provisions, BIA and the tribes did not determine the number of jobs available or the number of Indians seeking employment.

We believe that all mineral leases should specifically require Indian hiring preference and that BIA and the tribes should establish procedures which would require lessees to provide BIA and the tribes with sufficient data to help insure

that Indian preference in hiring is being followed. Procedures have been established by the Navajo and Crow Tribes to insure Indian preference in hiring.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To improve Indian employment in the minerals industry, we recommend that Secretary of the Interior direct the Commissioner of BIA to

- --establish specific requirements in all Indian leases for Indian preference in hiring and procedures for lessees to regularly report to BIA and the tribes on the status of Indian employment and
- --establish procedures, for each reservation with minerals development, for either BIA or the tribe to insure that Indian preference in hiring provisions and requirements are being followed.

CHAPTER 4

OPPORTUNITIES TO IMPROVE COAL-LEASE TERMS

The leasing of Indian lands for mineral development is an important part of the economy on many reservations. According to USGS, in fiscal year 1974 there were 13,064 oil and gas leases and 981 leases for other minerals on Indian reservations. For the same period, BIA reported that the total income from these leases amounted to about $52.7 million. We believe that BIA can improve management of Indian mineral resources and increase Indian income from minerals development. For most Indian coal leases we reviewed, royalty rates on coal remained fixed during periods of rising prices. Furthermore, the Federal regulation limiting the amount of coal-lease acreage on Indian land needs to be reevaluated.

RESPONSIBILITIES AND OBJECTIVES FOR LEASING INDIAN MINERAL RESOURCES

BIA and USGS share responsibility for managing Indian mineral resources. BIA's objective in carrying out its responsibilities for approving mineral leases and permits is to obtain for the Indian owners a maximum recovery and income consistent with a sound conservation program.

Although BIA is responsible for all phases of mineral management through the leasing process, USGS also plays an important role since it is responsible for advising BIA on the adequacy of the lease terms and for assuring compliance with the lease terms. During the leasing process, USGS' specific responsibilities are to advise BIA and the tribes on

--the number of acres to be leased, royalty rates, and lease terms and

--the adequacy of bids received from interested parties.

USGS responsibilities for assuring compliance with lease terms are discussed in chapter 5.

ROYALTY RATES SHOULD BE BASED ON THE SELLING PRICE OF COAL

BIA has not established a coal-lease rate policy based on the selling price of coal. This has resulted in situations where the Indians do not benefit from their coal resources as the market value increases. With a fixed royalty rate, Indian

income per ton remains constant regardless of the selling price of the coal.

The Code of Federal Regulations (25 CFR 171.15 and 172.18) provides for a minimum royalty rate for coal of not less that 10 cents per ton. These regulations provide that for most other minerals, including oil and gas, royalty rates be set at a percentage of the selling value of the minerals. In November 1975 BIA officials said a proposal to require rates based on the increasing value of coal was being considered by the Commissioner of Indian Affairs. The officials added that as a result of the current increase in the demand for and selling price of coal, it has only recently been advantageous to require percentage royalty rates. They said when past fixed royalty rate leases were approved, the rates established did provide the Indians with a fair return.

We reviewed 15 coal leases from the Crow, Northern Cheyenne, and Navajo Reservations; 12 had fixed royalty rates and only 3 had royalty rates based on the selling price of coal. One of these three leases, negotiated in 1964, required that the royalty rate be 6.67 percent of monthly sales but not less that 25 cents per ton. The remaining two leases, although containing provisions for a fixed rate, required that the rate be increased as the selling price of coal increases to a certain level.

The acceptability of percentage royalty rates by coal companies is evidenced by the fact that the Crow Tribe in November 1974 successfully renegotiated the lease terms for two of its leases--replacing fixed royalty rates with percentage royalty rates. Also, USGS, responsible for coal leasing on Federal land, changed its policy from calculating royalties on the basis of a fixed amount per ton to a percentage of the selling price in February 1971. However, USGS policy is not required to be followed on Indian land. In April 1971 the Northern Cheyenne Tribe conducted a sale of exclusive coal prospecting permits with an option to lease on 18 tracts of reservation land covering about 367,000 acres. The royalty rate for leases issued under the permits was set at 17.5 cents per ton. However, USGS did not recommend percentage royalty rates and concurred in the terms of the sale. USGS said that its recommendations for the lease were made before the Federal policy change and before advertising the lease sale. The officials stated that it would have been difficult to stop the sale at that point and begin again.

In October 1964 the Navajo and Hopi Tribes had entered into a prospecting agreement with a major coal company with the option to lease up to 58,270 acres of land jointly owned by the tribes. The prospecting permit included a specific

right to lease with royalty terms of 6.67 percent of the monthly gross income, but not less than 25 cents per ton for all coal sold. Under the lease, the Navajo Power Plant, which is not on the joint-use area, will use 8.2 million tons of coal a year by 1976. BIA officials estimated the selling price for coal will be between $3.50 and $5.50 per ton by 1976. Using these selling prices, the minimum royalty income to the Navajo and Hopi Tribes assuming production of 8.2 million tons per year, will range between $1,914,290 and $3,008,170 per year. If they had accepted the 17.5 cent rate per ton used in coal leases on other reservations, income would have ranged between $479,290 and $1,573,170 less a year.

The 1971 policy change for Federal lands as well as the potential increased income to Indians justifies a change in future leasing terms for Indian mineral resources from the fixed-rate method to the percentage-rate method. This policy should also be applied to existing leases as renegotiations occur.

COAL-LEASE ACREAGE LIMITATION NEEDS TO BE REEVALUATED

Federal regulations for Indian mineral leasing (25 CFR 171.9(b) and 172.13) provide that a coal lease shall ordinarily be limited to 2,560 acres. The Commissioner of BIA may, however, upon application approve the combining of leases or the issuance of a single lease for more than 2,560 acres if the approval of such larger acreage is in the interest of the lessor and necessary to permit the establishment or construction of thermal electric powerplants or other industrial facilities on or near the reservation. A review of 15 coal leases disclosed that 10 exceeded the 2,560-acre limitation. These leases ranged in size from 11,157 to 40,287 acres.

BIA believes that the 2,560-acre limitation is not realistic for modern coal mining. In discussing the 2,560-acre limitation with BIA central office officials, we were told that the limitation is probably too restrictive and does not provide the flexibility necessary for modern coal mining. These officials believe that the 2,560-acre limitation is no longer valid and they are considering abolishing it. They said that each lease should be analyzed separately to determine what acreage should be allowed and that coal reserves, lessees' development plans, and the amount of resources the lessees must invest in the lease should be among the factors considered in determining a lease's acreage. The officials believe that large acreage leases are necessary to attract ecomomic development on the reservations, but realize that such leases must contain provisions to require diligent

development with the stipulation that if such development does not occur the lease can be canceled. They also said that the ultimate decision on the size of the lease should be up to the tribe, as long as the tribe is aware of all the considerations and alternatives to a large lease.

BIA's Billings Area Office, responsible for coal leasing on the Crow and Northern Cheyenne Reservations, also believes that the 2,560-acre limitation is obsolete. In February 1972 the Billings Area Office told the Commissioner of BIA that coal lessees should be able to lease as many acres as necessary as long as they can be kept contiguous. They stated that coal operators need huge coal reserves that may not be mined for years and that without such reserves the operators could not attract financial assistance required to start a mining operation. In January 1972 the area office informed one coal company that it had revised the policy regarding the 2,560-acre limitation and would grant a single lease for as many contiguous acres as the lessee may require.

In January 1974 the Northern Cheyenne Tribe petitioned the Secretary of the Interior to set aside all outstanding coal permits and leases on the reservation. The petition, in part, states that there has been a pattern of gross deviation by the Secretary and his representatives from the terms of the regulations (25 CFR 171) regarding the Northern Cheyenne coal transactions, including violations of the 2,560-acre limitation. The petition states that it is highly significant that although the beneficiary had been advised verbally of the proposed use of its land for gasification plants, and although the lease contained a clause giving the coal company the right to construct such plants as it deems necessary for processing its product, nowhere can one find any documents expressing declarations concerning the gasification plants.

In his June 4, 1974, decision on the Northern Cheyenne petition, the Secretary of the Interior stated that there was no clear evidence of an explicit waiver of the excess acreage limitation and directed that the coal company and the Northern Cheyenne Tribe limit the lease to 2,560 acres or less or clearly demonstrate the need to waive this limitation. The Secretary also determined that no further administrative action could be taken on the leases until an environmental impact statement is completed and he has made a determination that further action should be taken. As of February 1976 the environmental impact statement had not been prepared.

We believe that BIA, in conjunction with USGS, should determine whether the 2,560-acre limitation and the criteria for exceeding the limitation are realistic or if the regulation

should be revised. In making such a determination, BIA and USGS must first identify the factors which should be considered in determining the number of acres to be contained in a lease. We believe that BIA and USGS should consider factors such as the amount of coal reserves on the acreage to be leased; the lessee's plans to develop the acreage, including plans for diligent development; the definite and prospective markets for the coal produced; the amount of coal committed for sale; resources the lessee must invest in the development; plans for financing the project; compensation to the tribe for allowing the lessee to hold such large acreages; and overall benefits to the Indians.

Also, in reviewing BIA files for coal leases in excess of the 2,560-acre limitation, we found that BIA was not adequately documenting the justifications or reasons for approving the excess acreage. BIA must fully document lease transactions in order to defend its actions and properly answer questions which may arise regarding approval of particular leases.

Of the 10 leases we reviewed exceeding the acreage limitation, documentation was inadequate for 8 as to the basis for BIA's action to waive the 2,560-acre limitation. For the remaining two leases, documentation showed that the Assistant Secretary of the Interior suspended the requirement that the lease comply with the Federal regulation in order to bring additional income to the tribe(s), improve economic conditions of the area, and provide employment opportunities for the Indians.

CONCLUSIONS

To help insure that Indians receive a fair return on the value of their coal resources, BIA should establish a coal-lease rate policy based on the selling price of coal with a floor below which the rate cannot fall. Such a policy will benefit the Indians as the price of coal increases since there would be a corresponding increase in income.

BIA, in conjunction with USGS, should also reevaluate the 2,560-coal lease acre limitation and identify the various factors which should be considered in determining the number of acres to be contained in the leases. By identifying these factors, BIA and USGS should then be better able to judge the adequacy of the present 2,560-acre limitation and, if necessary, modify or take action to implement new regulations. Also, BIA should act to insure that lease files are completely documented to support actions it takes on coal leases.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To help insure that Indians benefit from the increasing value of the coal resources and to improve coal-lease management, we recommend the Secretary of the Interior direct the Commissioner of BIA to:

--Establish a coal-lease royalty rate policy based on a percentage of the selling price of coal, with a fixed amount (floor) below which the price cannot fall.

--Determine whether the 2,560-acre limitation and the criteria for exceeding the limitation are valid, and, if it is found they are no longer valid, take action to revise the Code of Federal Regulations accordingly. In making this determination, factors to be considered in determining the number of acres to be leased should be identified. This recommendation should be carried out with USGS assistance.

--Insure that BIA lease files are adequately documented to support all actions taken.

79-324 O - 76 - 8

CHAPTER 5

OPPORTUNITIES TO IMPROVE LEASE MANAGEMENT

USGS can improve lease management and increase Indian income by

--performing required inspections of oil and gas well sites;

--collecting royalties due in a timely manner and applying penalties for noncompliance with lease terms;

--requiring timely receipt of reports, verifying nonproduction and performing postaudits; and

--coordinating reclamation activities of reservation land and water resources performed by various agencies.

USGS RESPONSIBILITIES FOR INDIAN MINERAL LEASING

USGS responsibilities for Indian mineral leasing operations are set forth in Leasing of Tribal Lands for Mining (25 CFR 171) and Leasing of Allotted Lands for Mining (25 CFR 172). In addition, USGS's Oil and Gas Operating Regulations (30 CFR 221) give it the following responsibilities for Indian leasing:

--Determine lessee rental liabilities for leased land.

--Record rentals, royalties, and other payments due to the Indians.

--Maintain lease accounts.

--Receive reports of lessee operations and sales.

--Require compliance with lease terms and applicable laws and regulations.

LACK OF MONITORING AND ENFORCEMENT OF LEASE PROVISIONS

Our review showed that USGS has not adequately fulfilled its responsibilities for Indian lease operations. USGS officials said that the major reason it has been unable to carry out its responsibilities is because it does not have enough

personnel. USGS central regional office, in its fiscal year 1976 proposed budget, stated that additional staff are needed to

--accomplish necessary lease, well, and other inspections;

--handle increased workloads; and

--expand the accounting section to process work backlogs and establish an effective audit group for postaudit work on producing royalty accounts.

An Office of Audit and Investigation, Department of the Interior, audit report dated June 9, 1975, entitled "Review Of Royalty Accounting System For Onshore Oil And Gas Leases," also identified problems with USGS regarding receipt of lessee operating reports, royalty payments, and postaudit of lessee accounting. The report attributed many of these problems to insufficient staffing.

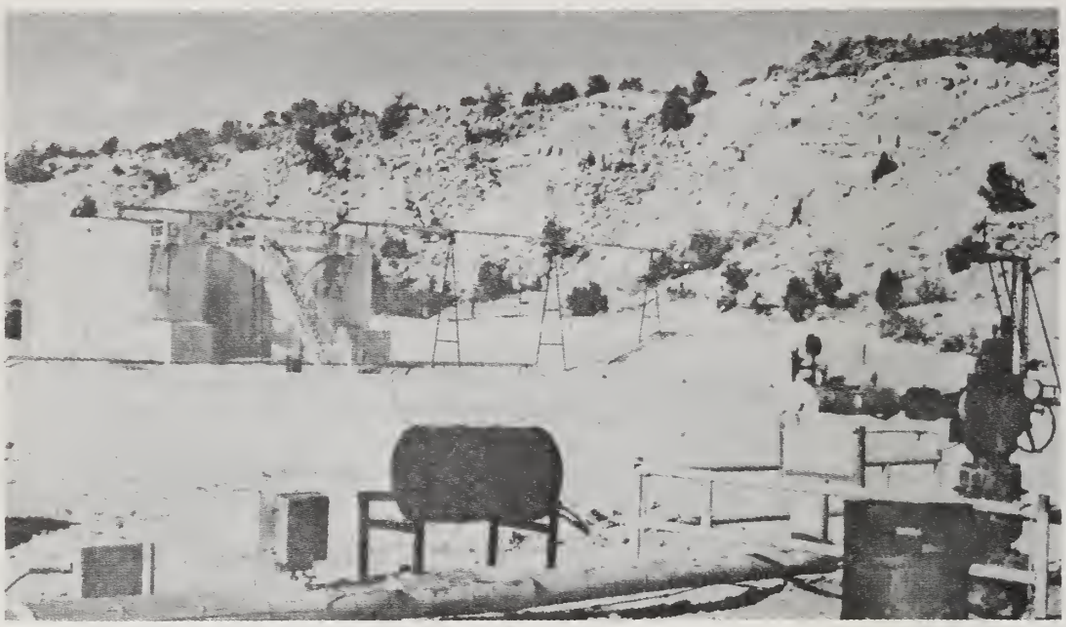
Required inspections not performed

USGS is required to perform oil and gas well site inspections for lease compliance including drilling, producing lease, abandonment, and meter proving inspections; e.g., to insure that meters that measure oil allocation and sales are accurate. The frequency of required inspections ranges from quarterly to annually, depending on the type, while certain types are required to be conducted on an as-needed and random basis. However, for fiscal year 1973, the USGS central region reported that only 15 percent of required oil and gas lease inspections work was done.

In the Northern Rocky Mountain Area, which includes the Uintah and Ouray Reservation (see photographs, p. 30), USGS performed only 20 percent of its required inspections in fiscal year 1973. The Southern Rocky Mountain Area, which includes the Jicarilla Reservation, reported performing only about 10 percent of its lease inspection work in fiscal year 1973. In its fiscal year 1975 budget justifications, USGS reported that its current resources permit only about 10 to 20 percent of the required oil and gas lease inspection work to be done.

We believe that USGS cannot determine if lessee's operations are in compliance with regulations without performing site inspections. The following situations might have been averted if more frequent inspections had been performed.

--While on a USGS-conducted tour of the Uintah and Ouray Reservation, we were shown an unapproved



OIL AND GAS WELL FACILITIES ON THE UINTAH AND OURAY RESERVATION.

OIL STORAGE FACILITY WHICH STORES OIL FROM WELLS OWNED BY INDIAN (UINTAH AND OURAY TRIBE), FEDERAL, AND PRIVATE INTERESTS.

common oil storage facility which violated regulations. This facility stored oil from Indian and non-Indian wells and the system did not provide adequate assurance that production from each well could only be allocated to that well. USGS officials said that there are other such unapproved facilites on the reservation. This facility also contained an unapproved oil metering system. A USGS official stated it is essential that automatic metering systems be checked regularly, otherwise it may be possible for a lessee to steal oil. This storage facility had been in operation over 6 months without approval, although the oil company had requested USGS approval of the facility. USGS officials informed us that this type of problem exists because it only has two inspectors to cover its Salt Lake District, which contains about 19.7 million acres.

--While on a tour of the Jicarilla Reservation, we were shown a well which had been flaring gas into the atmosphere for over 6 months without USGS approval. USGS inspectors were unaware of the flaring until the time of our visit. Unjustified flaring of gas can result in lost royalties to the Indians.

Our review showed that USGS' central region requested 222 new positions for fiscal year 1976. However, according to a USGS headquarters official, in its 1976 budget request USGS requested only 156 position increases nationally for all of its Conservation Division, of which the central region is a part. The central region was assigned 40 position increases, 10 of which were for oil and gas operations. The central region estimated that it will be only about 35-percent effective in carrying out its oil and gas responsibilities in fiscal year 1976, even after the staffing increases. Its fiscal year 1975 effectiveness was 32 percent. USGS measures effectiveness by its ability to carry out its required work.

Late royalty payments and penalties

We examined oil and gas royalty accounts for the Uintah and Ouray, Jicarilla, and Osage Reservations to determine if oil and gas companies were making royalty payments in a timely manner. Significant amounts of royalty payments were being received late on the Uintah and Ouray and Jicarilla Reservations where USGS is responsible for collecting payments, but not on the Osage Reservation where BIA has this responsibility. Federal regulations applicable to the Uintah and Ouray and Jicarilla Reservations do not require a specific penalty charge on late royalty payments.

The Osage Reservation oil and gas regulations require a late charge of 1.5 percent for each month or fraction thereof until payment is made. Although the timely collection of royalties on the Osage Reservation may, in part, be attributed to a specific minerals group that monitors royalty payments on a current basis, the availability of a precise charge to assess lessees, if the BIA Agency Office considers it necessary, helps enforce prompt payment.

The Code of Federal Regulations (25 CFR 171.16) provides that royalties for oil and gas on the Uintah and Ouray and Jicarilla Reservations are payable by the last day of the month following the month of production. Royalties for Osage oil and gas are payable by the 25th of the month following the month of production (25 CFR 183.45). A comparison of royalty payments on the Osage, Uintah and Ouray, and Jicarilla Reservations for a 3-month period in 1974 revealed the following:

Reservation	Payments examined	Late payments	Percent late
Osage	4,824	13	0.3
Uintah and Ouray	60	42	70.0
Jicarilla	60	28	46.7

We made a random selection of 20 of 207 producing oil and gas leases on the Uintah and Ouray Reservation to determine the dollar significance of late royalty payments over a 14-month period during 1974 and 1975. Royalties totaling over $715,000 were made from 1 to 18 months late. If the Osage late charge of 1.5 percent a month was applicable to the Uintah and Ouray Tribe leases, they would have received over $17,300 in late payment fees.

We also made a random selection of 20 of 125 producing oil and gas leases on the Jicarilla Reservation to determine the significance of late payments over a 14-month period during 1974 and 1975. Royalty payments totaling over $270,000 were made from 1 to 11 months late. If the 1.5 percent late charge fee were applied, the tribe would have received over $6,600 in late payment fees.

BIA Osage Reservation officials said they had no significant problems with royalty payments being made late. BIA Osage officials added that they examine each late payment to determine why the payment was late. They said normally they do not charge lessees for making late payments because the amount is insignificant and, consequently, the amount of the late charge would be small. The officials added that once they contact the lessee, or the oil or gas purchaser, concerning the late royalty payments, the payment is usually

made. In reviewing royalty payments from December 1974 through February 1975, we found late payments on the Osage Reservation to be relatively insignificant compared to royalties received of about $3.4 million during this period. Royalty payments totaling only about $23,000 were 1 month overdue.

USGS officials responsible for supervising oil and gas lease operations on the Uintah and Ouray and Jicarilla Reservations agreed that Indians were not receiving their royalty payments on time. The officials stated that they could better enforce prompt payment of royalties if they had sufficient manpower to insure that the payments were received on time and a penalty could be assessed whenever payments were late. Because of the amount of late payments, USGS should establish a specific charge for late royalty payments.

The Office of Audit and Investigation, Department of the Interior, in its June 9, 1975, report entitled "Review Of Royalty Accounting System For Onshore Oil And Gas Leases," also noted a significant number of late royalty payments to USGS and reported that meaningful financial penalties are necessary with uncooperative lessees or in cases of lessees who seek financial advantage by persistently delaying royalty payments. The report recommended that USGS establish meaningful penalties for overdue royalty payments.

A USGS headquarters official informed us that the Department of the Interior is currently considering revising its Federal regulations for oil and gas operations which include provisions for a specific penalty for late royalty payments. The proposed penalty rate is expected to be comparable to the prime interest rate charged by the major commercial banks in the area where the lessee operations are located.

Production and sales reports not received by USGS, nonproduction not verified, and postaudits not performed

USGS oil and gas regulations require lessees to submit various types of reports to USGS including reports of operations listing products produced, volume of products sold (run tickets), and royalty reports for products sold. Also, the USGS Area Oil and Gas Supervisor can, if he considers it necessary, require purchasers of oil and gas to submit reports of products purchased. The above reports often were not being submitted as required. These reports allow USGS to monitor production and royalty payments and can also be used in conducting postaudits.

In its Northern Rocky Mountain Area, which includes the Uintah and Ouray Reservation, USGS did not strictly enforce the requirement that the reports of the volume of products sold be submitted. Also, reports from purchasers were not required. Purchaser reports permit USGS to compare reports of products sold with products purchased to determine if they are in agreement and whether the company is accurately reporting production. USGS officials indicated that, because of inadequate staff, they cannot enforce the requirement that these reports be submitted. If these reports are not received, or are received late, it is difficult to compare production reports and perform postaudits. USGS must instead rely on the lessees' integrity concerning reported production and must assume that lessees have correctly reported and paid royalties and that lease accounts are accurate.

In addition to the lack of needed reports from lessees, USGS officials told us that the lack of staff to audit lease accounts has also hindered the performance of postaudits. In its Northern Rocky Mountain Area, USGS is postauditing only about 5 percent of the Indian lease accounts, even though the benefit of such audits has been significant. For example, during a 2-year period ended June 1975, the Northern Rocky Mountain Area collected additional revenues from both Federal and Indian oil and gas leases of over $798,000 through postauditing. A USGS area office official said it would be preferable to postaudit all accounts at least biannually.

In the Southern Rocky Mountain Area, USGS does not verify that "run tickets" are received as required and, according to a USGS official, many operation reports are received late. The Southern Rocky Mountain Area requires purchasers to submit reports on products purchased. In this area, less than 5 percent of all Federal and Indian accounts are postaudited. In 1973 postaudits of Indian leases in this area office resulted in collections of about $167,000. A USGS area office official also stated substantial amounts of money are realized from postaudits but that additional auditors are needed.

The Office of Audit and Investigation report of June 9, 1975, which applied to both Federal and Indian oil and gas leases, identified similar problems including:

--The USGS royalty accounting system does not function smoothly because information which is needed is not required and information which is required is either not submitted or submitted late.

--USGS devotes little effort to postaudit; i.e., analysis of prices, volumes, allowances, and reconciliation of account balances.

--USGS needs better controls for verifying production quantities.

--The main reason the USGS royalty accounting system has so many problems is because of a chronic understaffing problem.

We were told that the lack of staffing has also forced USGS to rely upon industry to inform it if oil or gas wells are producing. When an oil or gas well is operating, the lessee is required to send monthly production reports to USGS. If there is no production the lessee is required to report that also. USGS, we were advised, does not have the staff to independently verify whether the well is producing or not. In one case on the Uintah and Ouray Reservation, the USGS district office was unaware that a well had been in production for over 9 months. Since the lessee had not sent production reports to USGS, the district office was not aware that royalties were due. However, in this case the lessee had been sending royalty payments to the USGS area office. If the lessee had not made such payments, USGS would not have known that payments were due. A USGS district office official added that there could be other such cases on the reservation.

USGS should coordinate reclamation activities

The monitoring of reclamation activities--the reconditioning or restoration of land or water affected by mineral development--is the responsibility of USGS on Federal and Indian lands. However, BIA, State, and local agencies are also involved in certain reclamation activities. USGS reclamation responsibilities are not outlined in the Code of Federal Regulations, although they are discussed in various sections (25 CFR 171, 172, and 177). USGS should coordinate the reservation reclamation activities of the various agencies to help clarify reclamation responsibilities on the reservations and to avoid possible duplication of effort.

On the Navajo Reservation, where coal development has started (see photographs, p. 36), three organizations--USGS, BIA, and the State of New Mexico--are responsible for monitoring reclamation on the reservation. The tribe is also involved in reservation reclamation activities. There are no formal agreements among these organizations to coordinate reclamation activities. One USGS official said there is no clear definition of responsibilities for monitoring reclamation on the reservation and, as a result, each agency is operating independently. New Mexico has assumed jurisdiction

STRIP MINING OPERATION ON THE NAVAJO RESERVATION.
(Photograph furnished by BIA.)

COAL ON THE NAVAJO RESERVATION READY TO BE REMOVED AFTER OVERLAYING ROCK AND SHALE HAD BEEN STRIPPED AWAY.
(Photograph furnished by BIA.)

on Indian lands and State officials said they will continue to act in this capacity until court action dictates otherwise. Reclamation efforts were just starting on the reservation at the time of our review; therefore, we could not evaluate their effectiveness.

On the Crow Reservation, State of Montana reclamation requirements apply to "ceded" lands where coal development is taking place. "Ceded" land is land on which the surface rights are owned by non-Indians but the Indians have retained the mineral rights. There are, however, no coordination agreements between BIA, USGS, or Montana concerning responsibilities for reservation reclamation.

In addition, there are no coordination agreements on the Fort Berthold Reservation among USGS, BIA, or the State of North Dakota concerning reclamation activities. The State attorney general has ruled that the State coal mine inspector has no authority regarding coal mines on Indian lands.

Because most coal development had not begun on the reservations in our review, reclamation activity was minimal. The lack of coordination and specific responsibilities had not caused any problems in assuring that reclamation was satisfactorily occurring. However, once coal development activities become extensive proper coordination could help avoid problems, such as

--inadequate restoration of water resources,

--incorrect contouring of the land,

--improper types of vegetation used to revegetate the mineral development area, and

--delay in reclamation or failure to reclaim the land.

CONCLUSIONS

USGS has not adequately fulfilled its responsibilities for mineral resource development on Indian reservations. USGS has not (1) performed required oil and gas lease site inspections, (2) properly monitored royalty payments and operating reports, (3) verified lessee reports that oil and gas wells are not producing, (4) postaudited most lease accounts to insure that the Indians are receiving all royalties due, and (5) developed procedures to coordinate reclamation activities on the reservation with the various agencies involved to assure that reclamation is properly carried out. Also, USGS does not have a specific penalty for late payment of oil and

gas royalties due the Indian people. Many of the deficiencies we found have been due primarily to a lack of adequate staff.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

To improve USGS management of leases of Indian mineral lands, we recommend that the Secretary of the Interior require the Director of Geological Survey to

--establish a penalty fee for late payment of royalties and enforce such requirements as necessary;

--instruct lessees to submit reports required by Federal regulations and lease terms when they are due and require purchasers of Indian mineral resources to submit reports on products purchased;

--establish procedures to coordinate reservation reclamation activites among the various agencies involved with this activity on each reservation;

--determine the level of staffing necessary to satisfactorily perform its oil and gas responsibilities on Indian lands and take the steps necessary to obtain such staffing;

--require its field offices to verify on a random basis that oil and gas wells reported to be shut down are no longer producing;

--perform all required oil and gas site inspections; and

--postaudit all Indian oil and gas lease accounts.

CHAPTER 6

SCOPE OF REVIEW

In conducting our review of the development and management of coal, oil, and gas on seven Indian reservations, we reviewed applicable laws and regulations and BIA- and USGS-related policies, procedures, and practices. We also discussed the management of these resources with BIA officials at the central, area, and agency offices; USGS officials at the central, area, and district offices; various tribal offices; State officials; and representatives of the coal and petroleum industries.

Our review was conducted at:

--BIA central office, Washington, D.C., and at various field offices in Arizona, Montana, North Dakota, New Mexico, Oklahoma, South Dakota, and Utah.

--USGS central office, Reston, Virginia, and at various field offices in Colorado, Montana, New Mexico, Utah, and Wyoming.

--The Navajo Reservation in Arizona and New Mexico, the Crow and Northern Cheyenne Reservations in Montana, and the Fort Berthold Reservation in North Dakota for coal development and the Jicarilla Reservation in New Mexico, the Osage Reservation in Oklahoma, and the Uintah and Ouray Reservation in Utah for oil and gas development.

APPENDIX I

APPENDIX I

HENRY M. JACKSON, WASH., CHAIRMAN
[illegible] N.H.
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United States Senate
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
WASHINGTON, D.C. 20510

June 11, 1974

The Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Comptroller General:

As you know, due to the ever increasing demand for energy fuels, the United States is currently experiencing a fuel shortage. Also, to varying degrees, the Nation is experiencing shortages of certain agricultural and meat products, timber for home construction and other commercial purposes, and other mineral resources.

The American Indians, who have long been considered to be among the most disadvantaged Americans, have significant land and natural resources which, if properly developed, could play a significant role in contributing toward a reduction in these shortages and at the same time provide much needed employment, income, and economic development for the Indian people. For example, Indian lands contain nearly 44 million acres of range land, 13 million acres of forests, and 1.2 million acres of cropland. Also, a recent newspaper article stated that over two dozen Indian reservations contain significant reserves of oil, gas, coal, uranium, oil shale, tar sands, and geothermal resource potential. The article further noted that other reservations contain deposits of copper, tungsten, iron, gold, silver, phosphate, asbestos, and limestone.

The Committee is concerned about the energy, mineral, food, and timber shortages facing the Nation and the need to develop our domestic resources. Therefore, I

 APPENDIX I

would appreciate it if you would undertake a review of the efforts of the Bureau of Indian Affairs to encourage the development of the natural resources on Indian reservations and, which at the same time, could provide the Indian people with much needed employment, income and economic development.

You may disclose that your review is being made at the request of the Committee and you may obtain agency comments on your report.

The Committee and its staff stand ready to assist you in your efforts.

Sincerely yours,

Henry M. Jackson
Chairman.

HMJ/fgh

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